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# THERAPEUTICS

OF

# GYNECOLOGY AND OBSTETRICS

COMPRISING THE

MEDICAL, DIETETIC, AND HYGIENIC TREATMENT

OF

# DISEASES OF WOMEN.

---

SECOND EDITION, THOROUGHLY REVISED AND GREATLY ENLARGED.

---

EDITED BY

WILLIAM B. ATKINSON, A. M., M. D.,

AUTHOR OF "HINTS IN THE OBSTETRIC PROCEDURE," LECTURER ON DISEASES OF CHILDREN AT THE JEFFERSON MEDICAL COLLEGE; PHYSICIAN TO THE DEPARTMENT OF OBSTETRICS AND DISEASES OF WOMEN, HOWARD HOSPITAL; CORRESPONDING MEMBER OF THE GYNECOLOGICAL SOCIETY, BOSTON; FELLOW OF THE AMERICAN ACADEMY OF MEDICINE; HONORARY MEMBER OF THE MEDICO-CHIRURGICAL SOCIETY, BOLOGNA, ITALY, ETC.

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# PUBLISHER'S NOTICE

The present volume is the third in the Series of "Modern Therapeutics," originally projected by the late Dr. GEORGE H. NAPHEYS, but which his death prevented him from completing. The work has been finished under the able supervision of Dr. WM. B. ATKINSON, whose wide experience in this branch of professional study is a sufficient guaranty that it has been well done.

The aim of the Series is to present the most modern and approved plans of treating the diseases considered, as set forth by the most eminent authorities and specialists in this country and Europe. The word *Therapeutics* is taken in its widest sense, including all efficient means of combating disease, not only pharmacal, but hygienic, dietetic, climatic and specific as well. A number of authors are quoted, and their views accurately presented. When they differ, as is not infrequently the case, no magisterial attempt is made to decide which is in the right, as this difference of opinion is evidence that further observation and a very wide induction are demanded to reach a positive decision. It is better that such difference should be noted by practitioners, and that the circumstances of the case and its surroundings should be the guide to the selection of remedial measures.

The "Résumés of Remedies," added to each disease, are intended to set forth, in alphabetical order, all the agents which have been recommended in its treatment by good, recent authorities. New methods and recent additions to the Materia Medica are given special attention, but only such admitted as appear to

have solid evidence in their favor. Those of special value are marked with an asterisk (*). In this department recent medical periodical literature has been closely scanned for information, and references are given to special articles and monographs.

Substantially the same plan is carried out in all the volumes of the series, and the favorable reception which the *Medical Therapeutics* and the *Surgical Therapeutics* have met with, induces a hope that the present volume will be found not less serviceable to the practicing physician.

# EDITOR'S PREFACE

## TO THE FIRST EDITION

In compliance with the wish of the publisher, the editor of the present volume has carefully reviewed the material prepared for it, and has added extensively from recent treatises, monographs and journals, containing matter on the two specialties represented. The great activity which has been manifested of recent years in these branches, particularly that of Gynecology, renders it almost impossible for a physician who has to attend to a large general practice to follow the rapid advance in therapeutic methods which has taken place. This work is designed to present him all of these which are worth his attention; great care has been exercised that nothing of ascertained value should be omitted; and the editor believes that very few omissions of this character will be found.

In accordance with the plan preferred by the publisher, precise directions in the plans of treatment have been preserved, and the exact formulæ presented whenever these could be obtained. Undoubtedly, in some instances, the therapeutic vagueness which is fashionable in many books on practice at the present day, is largely chargeable with the distrust of remedial measures often encountered among medical men.

It has been deemed best to preface each chapter with a "Synopsis of Diagnostic Points," setting forth, in brief but clear forms, the distinctive signs and symptoms between the diseases considered in the chapter. This permits the etiological plans of treatment to be presented more distinctly, and may also serve as a reminder in cases of puzzling similarity.

# PREFACE

## TO THE SECOND EDITION.

In preparing the second edition of this work, not only has the text of the previous edition been carefully corrected, but nearly *two hundred* additional pages of new matter have been added. The material for this has been drawn largely from a collation of the most recent German, French and English writers on this subject; the works of many of the former have never been translated, and hence are entirely new to the American public. Every effort has been made to render their teachings accurately and with sufficient fullness.

The extent of the revision may be judged from the fact that the index of authorities contains *one hundred and nineteen* additional names over that of the first edition. Various methods of treatment of diseases and complications, omitted in the previous edition, will be found in the present one, of which we may specify Balneo-therapy in Diseases of Women, Antiseptics in Labor, Disorders of the Eyes in Pregnancy, Placenta-Prævia, Coccygodynia, Fœtid Menstruation, etc. It is believed that the work, as it is now issued, is a faithful presentation of the most approved therapeutic methods in diseases of women as set forth by the most eminent authorities of modern times.

*Philadelphia, October, 1881.*

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# PART I.

# GYNECOLOGICAL THERAPEUTICS.

## INTRODUCTORY.

**Before proceeding to the consideration of the therapeutics of particular diseases, some suggestions will be quoted as to the**

## GENERAL MEDICAL TREATMENT OF DISEASES OF WOMEN.

DR. C. CHROBAK, OF VIENNA.*

In the modern treatment of diseases of females, the attention of physicians is more fruitfully addressed to defining the indications for the use of known remedies, than to the search for specifics. Of recent years, the introduction of so many mechanical aids into gynecology has led to an undue depreciation of the value of internal and general medication. There is no doubt but that cases which admit of local as well as general treatment recover more rapidly, but it is unwise and injurious to neglect the latter, as is often done.

Besides the general rules for indications and contra-indications, there are, in the treatment of women, many conditions to consider, which have reference to their psychical character and to the peculiar seat of the disease. It is not rare to see unpleasant com-

*_Handbuch der Frauenkrankheiten_, I. Edited by Billroth. 1879.

plications arise from any attempt at local treatment, and improvement commence when this is wholly suspended and measures addressed to the general system alone are employed. Local treatment is occasionally observed to increase the nervous irritability, to develop severe hysteric attacks, and even lead to mental alienation.

What lead to such conditions are the heightened sexual sensations, the sense of shame, the obligatory continence often required, and a number of similar emotions. When they lead to the results mentioned, all local interference should be suspended, and the erethism of the system reduced by anodynes, warm baths, exercise, change of air, scene and society, etc. Hydropathic treatment has a high reputation in such cases, but the procedures employed in institutions devoted to this branch are often too decided to exert good results on an over-excited nervous organization. Dr. C. has himself derived very positive benefits from the use of *oxygen inhalations* in allaying such general nervous erethism.

It is evident, therefore, that before any treatment is undertaken, the psychical condition of the patient should be carefully considered. There are some cases—fortunately not many —in which local treatment must be absolutely prohibited from the outset. In others, it should only be commenced after a preliminary general treatment. The patient must be convinced of the necessity of the local measures. They should be explained to her, and she should be assured that only the most indispensable examinations, etc., will be conducted. The moral support of the patient should be sought for, and her confidence in the operator heightened as much as possible.

The physical strength should be maintained at the highest point during local treatment. Feeble individuals, and those suffering from dyspeptic, gouty and other constitutional maladies, should receive treatment with a view to lessen these complications. Here is where health resorts, medicinal springs and sea bathing come happily into play, and will often be very efficacious.

All local treatment is to be avoided, when possible, during

pregnancy, for fear of leading to abortion or premature delivery. So far as the mother herself is concerned, it is probable that her risks under operations while in this condition have been unduly magnified by some writers. Lactation is another period which should not be chosen for local treatment unless the demand is urgent, inasmuch as the concomitant dietetic measures, enforced rest, etc., will very probably interfere with the secretion of the milk. The menstrual period was long considered to contra-indicate any kind of local treatment. As a general rule, the increased hyperæmia of the parts may be supposed to justify this, but for some operations, on the contrary, it is just the period to select. Thus SIMON has shown that in plastic operations on the female genitals, healing by the first intention is favored by the congestion which then prevails. In a general way it may be said that the most favorable period at which to begin local treatment is a few days after the menstrual flow has ceased.

In regard to *cohabitation* during local treatment, it must be considered, in nearly all cases, as positively injurious and to be prohibited. It induces local hyperæmia, and increases the nervous irritability; and as it may also lead to pregnancy, and thus completely interrupt the progress of the treatment, it is best to discourage it altogether.

Women experience the sensation of *pain* in very different degrees. Robust and vigorous ones may suffer greatly from a slight operation which a feeble and sickly person will bear without complaint. As severe pain acts injuriously on the nervous system, it must be avoided by the administration of anæsthetics. It may be observed that the vagina is less sensitive than the external genitalia, and that the vaginal portion of the cervix is scarcely at all sensitive in its ordinary condition. For general anæsthesia the same rules apply as in surgery, and the same contra-indications. They may be administered in the knee-elbow or any other position, but it is essential to have a competent assistant present to give the anæsthetic.

Of the *anæsthetics* employed, chloroform and ether continue to be the most popular, or a mixture of both with alcohol. Several

gynecologists, as SPENCER WELLS, HEGAR and KALTENBACH, have lauded the *bichloride of methylene.* It should be noted that when the finger or an instrument is introduced rather rudely into the rectum or vagina of a patient under anæsthesia, it is followed by hoarse, stertorous breathing, which is not, however, of alarming significance.

*Local anœsthesia* is not very reliable in operations about the vagina, and is mostly confined to parts easy of access and small operations, as puncturing an abscess, etc. As such may be mentioned ice, cold mixtures, vapor of ether and chloroform, and compression. Of these the most efficient is the ether pulverizer of RICHARDSON.

In recent years, *massage* has been introduced into gynecology as an efficient means in causing the absorption of deposits, in restoring vigor to atonic muscles, and in diminishing local irritability. BRANDT, of Stockholm, has laid down the details of the method, and advocated it in an extensive line of maladies of the uterus and its annexes. His recommendations have not been well received by gynecologists in general, and it is alleged that grave accidents have at times followed the manipulations. But it cannot be denied that in some cases excellent results have been obtained when all other resources of medical art had failed.

The most serious difficulty seems to be in the disagreeableness to the patient to have the genitalia subjected to the prolonged manipulation required. The essential element of massage is *intermittent pressure.* This may be obtained by centripetal stroking and rubbing with the hand and fingers. The part operated on should have a firm base, as one of the pelvic bones, etc. BRANDT advises also light taps, repeated pressure with the finger tips, etc., sometimes on the outer surface of the abdomen, sometimes with the finger in the vagina. The operator may also take the uterus between the fingers of both hands—the one in the vagina, the other externally—and exercise upon it gentle, continued or intermittent pressure. The massage should be at first very gentle and continued but for a brief session; later the pressure may be increased and the time prolonged, the rule being that increased

painfulness is a sign to discontinue. ZIEMSSEN recommends that it be applied in a warm bath. After the process the patient should remain for some time in entire rest, as the operation is followed by decided local hyperæmia.

---

## BALNEO-THERAPY IN DISEASES OF WOMEN.

In the United States, comparatively little systematic attention has been paid to the treatment of diseases of women by mineral and medicinal waters. We therefore select from one of the most recent German works on this subject, by Dr. IGNAZ MEYR, (*Anleitung zur Wahl der Curorte*, Wien, 1880,) the principles which, in Europe, have been proven most efficient in this method of therapeusis.

Dr. MEYR states that balneo-therapy has fully vindicated its value in this class of maladies. This is especially true of chalybeate water, sulphur springs, those holding in solution iodine and bromine, and the *sool or saline baths.*

The diseases in which the best effects have been observed are the anomalies of menstruation, affections of the uterus and ovaries, and in sterility.

Where the menstruation is deranged, with concomitant anæmia, dyspeptic symptoms, nervous irritability and loss of vigor, chalybeate waters may be advantageously used both internally and as baths. In lymphatic and scrofulous subjects, sea bathing is to be recommended, as also in membranous dysmenorrhœa. The ascending douche is a powerful agent, for which the necessary apparatus may be found at many European springs, as at Franzenbad, Pyrmont, etc. In sluggish temperaments, where painful menstruation is not associated with any change in the texture of the uterus, local baths of *dry carbonic acid gas* are indicat d. Where the nervous erethism is marked, the prolonged use of the cold water treatment is often efficacious.

In congestive dysmenorrhœa, with chronic metritis and induration, such sool baths as are found at Ischl, Gmunden, etc., or the iodine and bromine waters of Heilbronn, Kreuznach, etc. prove themselves of value.

When menstrual irregularity proceeds from disturbance of the cutaneous functions, suppression of the perspiration, hemorrhoidal disease or venous hyperæmia, especially in lymphatic individuals, the sulphur waters have special applicability. In France, the warm alkaline springs of Plombières and those of Eaux Chaudes, in the Pyrenees, are famous in such cases.

When menorrhagia is due to anæmia, atony of the uterus or granular ulceration of the cervix, the chalybeate waters, both internally and as baths, and injections, are called for; but when the excessive flow is connected with venous stasis, hyperæmia of the liver, heart disease, emphysema of the lungs, abdominal tumors or the climacteric epoch, the discutient alkaline springs, as Marienbad, Carlsbad, etc., and the saline waters of Franzenbad, Tarasp, etc., will be more appropriate, and will render essential service.

Against chronic parenchymatous metritis, with infarcts and exudations, cold local and general douches are recommended, and the use of the alkaline-saline springs, Homburg, Ems, etc. Where chronic exudations are the most prominent symptom, real and prompt benefit is often obtained from sool baths, the iodine and bromine waters, and sulphur springs. The former should be preferred where there is a scrofulous diathesis present, the latter when there is a prominence of nervous erethism, or where the infarct follows a puerperal inflammation or deficient involution. Chalybeate waters in these cases are only appropriate when marked anæmia is to be combated, and sea bathing should not be advised as long as the exudation remains unabsorbed.

Various waters containing iodine and bromine have been at times in repute for producing absorption of neoplasms in and around the uterus. They certainly do occasionally diminish the volumes of such growths, but their use is to be discountenanced when fever or much pain is present, or when the tumor is of

rapid growth. Springs of repute in such cases are Kreuznach Halle, in Austria, Wildegg and Saxon, in Switzerland, and Castrocaro, in Italy, which last-mentioned has also a reputation for diminishing hypertrophied breasts and mammary tumors.

Many waters are used with advantage in leucorrhœal cases. Where simple anæmia is present, the iron waters are appropriate; where the patient is scrofulous, those containing iodine and bromine, and the sool baths; where the vaginal mucous membrane is much relaxed, local douches of carbonic acid gas, and baths of pine tree needles, are adopted with good results. Waters containing chloride of sodium have also a just reputation in such cases.

Sterility, when, as is not unfrequently the case, it depends on general debility and anæmia, may at times be removed by the iron springs; and in other instances, probably where the sterility depends on a hyperacidity of the vaginal secretion, or similar constitutional cause, an alterative alkaline water often acts with satisfactory promptness. In Germany, the alkaline waters of Ems, and those of Wolkenstein, in Saxony, are famous for facilitating conception. The same is true of the warm alkaline springs of Plombières, in France, and those of Bormio and Krumbach, and of Citara, on the island of Ischia, etc. The last-mentioned is peculiarly tonic and stimulating, suitable for pale and weakly women.

Some obstinate cases of pruritus vaginæ, especially those occurring about the change of life, have been greatly relieved by warm alkaline and sulphur waters, used both internally and locally.

It is needless to say that the employment of these balneological means does not exclude treatment by the usual methods. It is only maintained that in many cases where the latter, used alone, fail to restore health, it can be recovered by the aid of the methods just rehearsed.

# PLAN FOR A GYNECOLOGICAL EXAMINATION.

A compact schedule for "case-taking" in gynecology was published in the *Edinburgh Medical Journal*, February, 1880, by Prof. A. R. SIMPSON. It is, in some respects, an improvement on any previously suggested, and for the convenience of practitioners we here append it:

*DISEASE.*

## ANAMNESIS.

1. NAME; AGE; OCCUPATION; RESIDENCE; MARRIED, SINGLE, OR WIDOW; DATE OF ADMISSION.
2. COMPLAINT AND DURATION OF ILLNESS.
3. GENERAL HISTORY OF—(*a*) Present Attack; (*b*) Previous Health; (*c*) Diathesis; (*d*) Social Condition and Habits; (*e*) Family Health.
4. SEXUAL HISTORY.
   (1) *Menstruation*—
      *A.* Normal—((*a*) Date of Commencement; (*b*) Type; (*c*) Duration; (*d*) Quantity; (*e*) Date of Disappearance.
      *B.* Morbid—(*a*) Amenorrhœa; (*b*) Menorrhagia; (*c*) Dysmenorrhœa.
   (2) *Intermenstrual Discharge*—(*a*) Character; (*b*) Quantity.
   (3) *Pareunia.*
   (4) *Pregnancies*—(*a*) Number; (*b*) Dates of First and Last; (*c*) Abortions; (*d*) Character of Labors; (*e*) Puerperia; (*f*) Lactations.
5. LOCAL FUNCTIONAL DISTURBANCES OF—(*a*) Bladder; (*b*) Rectum; (*c*) Pelvic Nerves and Muscles.
6. GENERAL FUNCTIONAL DERANGEMENTS OF—(*a*) Nervous System; (*b*) Respiratory System; (*c*) Circulatory System; (*d*) Digestive System; (*e*) Emunctories.

## PHYSICAL EXAMINATION.

1. GENERAL APPEARANCE AND CONFIGURATION.
2. MAMMÆ.
3. ABDOMEN—(*a*) Inspection; (*b*) Palpation; (*c*) Percussion; (*d*) Auscultation; (*e*) Mensuration.
4. EXTERNAL PUDENDA.
5. PER VAGINAM—(*a*) Orifice; (*b*) Walls and Cavity; (*c*) Roof; (*d*) Os and Cervix Uteri.

6. COMBINED EXAMINATION—(Abdomino-Vaginal, Recto-Vaginal, Abdomino-Rectal, Abdomino-Recto-Vaginal, Abdomino-Vesico-Vaginal)—
   (1) *Uterus*—(*a*) Size; (*b*) Shape; (*c*) Consistence; (*d*) Sensitiveness; (*e*) Position; (*f*) Mobility; (*g*) Relations.
   (2) *Fallopian Tubes.*
   (3) *Ovaries*—(*a*) Size; (*b*) Situation; (*c*) Sensitiveness.
   (4) *Peritoneum and Cellular Tissue.*
   (5) *Bladder.* (6) *Rectum.* (7) *Pelvic Bones.*
7. USE OF—(*a*) Speculum; (*b*) Volsella; (*c*) Sound; (*d*) Curette; (*e*) Aspiratory Needle; (*f*) Tent or Dilator.
8. PHYSICAL CHANGES IN—(*a*) Nervous, (*b*) Respiratory, (*c*) Circulatory, (*d*) Digestive, (*e*) Emunctory Organs.

## DIAGNOSIS.

## PROGNOSIS.

## TREATMENT.

## PROGRESS AND TERMINATION

Every case will not, of course, demand inquiry regarding every point registered in the several paragraphs. But, on the other hand, any case that comes before us may demand inquiry as to any of these points.

# CHAPTER I

## DISEASES OF THE OVARIES, INJURIES OF MENSTRUATION AND SEXUAL DISEASES

*Synopsis of Diagnostic Points—Ovaritis, Acute and Chronic Congestion, Neuralgia, etc.—Ovarian Tumors—Amenorrhœa—Dysmenorrhœa—Menorrhagia and Metrorrhagia—Hysteria—Chlorosis and Anæmia—The Change of Life, or Climacteric Epoch.*

### SYNOPSIS OF DIAGNOSTIC POINTS.

#### OVARITIS.

The principal diseases of the ovaries are acute, subacute, and chronic ovaritis or inflammation, and ovarian tumors.

The following are the distinctions between the two forms of inflammation of the ovary.

| *Acute Ovaritis.* | *Chronic Ovaritis.* |
|---|---|
| Produced by sudden suppression of menstruation, parturition, or external violence. | Produced by displacements of uterus, irregular menstruation, or neglect of precautions at menstrual epoch. |
| Fever, pelvic chill; severe pain in one or both iliac regions. Great sensitiveness over the ovary, which may sometimes be felt as a round ball. | Pain over one or both ovaries, dysmenorrhœa and hysteria, pain in rectum and down thighs, worse after defecation, leucorrhœa, sometimes sterility and dyspareunia. |
| Abscess or resolution in four to six days. | Chronic, and not amenable to treatment. |
| The disease is rare. | The disease is quite common. |

# CHAPTER I.

# DISEASES OF THE OVARIES, DISORDERS OF MENSTRUATION AND GENERAL DISEASES.

*Synopsis of Diagnostic Points—Ovaritis, Acute and Chronic (Ovarian Neuralgia, etc.)—Ovarian Tumors—Amenorrhœa—Dysmenorrhœa—Menorrhagia and Metrorrhagia—Hysteria—Chlorosis and Anæmia—The Change of Life, or Climacteric Epoch.*

## SYNOPSIS OF DIAGNOSTIC POINTS.

### OVARITIS.

**The principal diseases of the ovaries are acute, subacute, and chronic ovaritis or oöphoritis, and ovarian tumors.**

**The following are the distinctions between the two forms of inflammation of the organ.**

| *Acute Ovaritis.* | *Chronic Ovaritis.* |
|---|---|
| Preceded by sudden suppression of menstruation, gonorrhœa, pelvic peritonitis or external violence. | Preceded by displacements of uterus, irregular menstruation, or neglect of precautions at menstrual epoch. |
| Fever, perhaps chill; severe pain in one or both iliac fossæ. Great sensitiveness over the ovary, which may sometimes be felt as a round ball. | Fixed pain over one or both ovaries, dysmenorrhœa and hysteria, pain in rectum and down thighs, worse after defecation, leucorrhœa, sometimes sterility and dyspareunia. |
| Abscess or resolution in four to six days. | Chronic, and not amenable to treatment. |
| The disease is rare. | The disease is quite common. |

In the subacute form, by the recto-vaginal touch, we may grasp with the two fingers a smooth, roundish body, as large as a cherry, producing exquisite pain. This sign is characteristic of subacute oöphoritis, for neither simple morbid congestion of the ovary, nor oöphoralgia, nor retro-uterine hematocele, nor metritis, nor lymphadenitis, nor perimetric phlegmon, will give the phenomenon of pain so well marked and so precisely localized.

It should be remembered that gonorrhœal infection is an occasional cause of acute ovaritis, in which case specific treatment is demanded after the first symptoms have abated.

In chronic ovaritis ATTHILL has observed that persistent vomiting is a prominent symptom.

In a lecture reported in the *London Medical Times and Gazette*, Dr. J. MATTHEWS DUNCAN states that occasionally this disease is seen as a consequence of fever, especially typhoid, cholera, and rheumatism; in close connection with these diseases, it is very frequently a result of the use of alcoholic liquors, even when these are not taken to excess; and this view of the causation of the disease is in the most gratifying manner frequently corroborated, if not proved, by the cure which follows upon the adoption of strictly temperate living. A great mass of cases occur as a consequence of recent marriage, suppression of menstruation, abortion, and delivery at the full time, when there is no evidence of blood-poisoning.

## OVARIAN TUMORS.

The diagnosis of these tumors is often of the utmost difficulty. In the first place, pelvic tumors generally are simulated by pregnancy, ascites, obesity, intestinal and vesical distention, and similar conditions. When a tumor is actually present, it may arise from other sub-peritoneal tissues as well as from the ovary. And when from the ovary, it may be either malignant or benign.

Professor KŒBERLE, of Strasburg, lays down the following general rules:

In subperitoneal serous cysts, there is no loss of flesh. The

tumor, unilocular, presents a very manifest fluctuation; its walls are thin; its development slow, though at times rapid enough; it sometimes attains a considerable size without becoming adherent, to neighboring organs; sometimes it is small and very adherent.

In cysts of the ovary, wasting is pronounced. The tumor, whether uni or multilocular, often presents a limited fluctuation; its walls are occasionally thin, occasionally more or less thick and resistant, hard nodulated; its development is ordinarily rapid, sometimes slow; lastly, it is adherent whenever the volume is at all considerable.

A more positive method is by *aspiration* and examining the contained fluid. This diagnosis rests principally on the presence or absence of albumen, metalbumen, and paralbumen. Parovarian cysts, or those of the broad ligament, contain a very fluid liquid, generally colorless and limpid as water, sometimes quite salt, but generally not containing any albuminous material; when it does contain albumen, it is the paralbumen that is precipitated by nitric acid, but the precipitate redissolves in acetic acid.

Cysts of the Fallopian tube contain only albumen, and no paralbumen; the precipitate produced by nitric acid is increased by acetic acid.

Ovarian cysts furnish a liquid charged with albumen, metalbumen, and especially paralbumen, giving a precipitate soluble in nitric acid.

Well marked, these reactions are conclusive; but there are exceptional cases where they are but feebly present.

All doubt is removed, however, and we have to do with an ovarian cyst, when puncture gives exit to a glutinous fluid, sometimes entirely uncoagulable by heat and nitric acid, rarely limpid, containing only traces of albumen (colloid cysts), or a fatty liquid containing in suspension mucus and epidermic detritus or hair (dermoid cysts.) Lastly, examined by the microscope, the fluid of ovarian cysts contains granular globules, yellowish, 0.003

millimetres to 0.060 millimetres in diameter, the envelope being rendered more apparent by acetic or phosphoric acid.

Mr. SPENCER WELLS remarks that in ascites the stomach and intestines, containing air, float on the surface of the fluid, and, therefore, the highest points of the tumor, the patient lying on her back, give out a clear sound on percussion. If, however, the fluid be contained in a cyst, the stomach and intestines are pushed aside, as the tumor rises in the abdomen, and lie in the epigastric and two lumbar regions. Hence, the highest points of an ovarian tumor emit a dull sound when percussed, and the epigastric and lumbar ones give a clear sound. By applying these general rules in any ordinary case, a few seconds will enable a surgeon to clear up all doubt.

ATLEE says mobility diminishes as size increases, there is freedom from constitutional symptoms, the emaciation is most striking about the face, neck, shoulders and arms, the expression of countenance is anxious, careworn, the features attenuated, the complexion pale. An important point in the position of the tumor in relation to the viscera; it is usually in front, and gradually crowds them backward, upward, and to the sides. There is a dull percussion sound over the space occupied by the tumor. Fluctuation can be recognized only in the tumor. The form of the abdomen is rarely uniform.

As a general rule, according to Dr. T. M. DRYSDALE, ovarian fluids have an animal odor; they are rarely clear, usually cloudy, and frequently opaque; in color they vary from that of white of egg or clear starch, to shades of yellow, red, green, or dark chocolate, or even inky black; in consistence, they may be almost like water, or thin syrup, mucilage, oil, or molasses, or ropy, or jelly-like; but they always are sticky and viscid, and generally feel slimy. A sediment rarely fails to form after a few hours; this is viscid, and often like pus. Reaction generally alkaline. Chemically they consist of albumen, fats, extractives and salts. Notably they contain an excessive amount of solid matter, often one-tenth of the whole weight of fluid. *They never contain fibrin*, unless hemorrhage has occurred into the cyst, or it has

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been inflamed. Microscopically they usually display free granular matter, oil globules, epithelial cells, crystals of cholesterine, etc., *but no matter what other cells may be present or absent, the cell which is almost invariably found in ovarian fluid is the granular cell.* This is generally round or may be slightly oval, delicate, transparent, contains a number of fine granules, but no nucleus. The granules are well defined. *Acetic acid makes them more distinct.* Either renders them nearly transparent. Other cells, on the addition of the acid, increase in size, become very transparent and exhibit nuclei.

The differential diagnosis between *ovarial cysts* and *ascites*, is represented as follows by Prof. ROBERT OLSHAUSEN, (*Handbuch der Frauenkrankheiten*, edited by Billroth, part VI.):

| *Ovarial Cysts.* | *Ascites.* |
|---|---|
| Of slow growth. | Rapid development; sometimes with fever; sometimes concominant heart, liver or kidney disease. |
| Œdema of the lower extremities rare and late. General œdema almost never. | Œdema of the lower extremities early; often general anasarca. |
| Abdomen barrel-shaped; ribs thrown outward. Antero-posterior diameter greater. Greatest periphery below the navel. | Abdomen spherical; ribs normal; the body, in lying, more broad than high; greatest periphery at the navel. |
| Change of position does not affect the form of the trunk. | Form of trunk differs when standing and when lying on the side. |
| Percussion of the most elevated portion (near the navel) hollow. Change of position does not alter percussion sound. | In lying on the back, percussion of most elevated portion sonorous. Change of position always brings the hollowest sound to the most elevated portion of the trunk. |
| Fluctuation limited to the region of the hollow sound. | Fluctuation marked, easily produced, most prominent at most elevated points. |
| Uterus often elevated or pushed back in the hollow of | Uterus often descends, even |

| | |
|---|---|
| the sacrum; diminished in mobility. | to prolapse; unusually movable. |
| Contained fluid thickish, mucous; of almost any tint; spec. grav. 1015–1030; very rarely coagulable; contains epithelial, cylindrical cells; often cholesterin, rarely pus corpuscles. | Fluid thin, clear; yellowish or greenish; sometimes tinged with blood; spec. grav. 1005–1015; sometimes coagulates after standing. Contains white blood corpuscles; seldom or never cylindrical epithelium or cholesterin. |

## AMENORRHŒA.

Amenorrhœa may be primative or acquired. In the first form menstruation has never taken place, or if it has occurred at all, the discharge has always been scanty, or has appeared at prolonged intervals, or both. In the second form menstruation has taken place regularly and healthily, and has afterwards become suppressed.

The following table represents the various forms of this affection, their causes and pathological significance:

### PRIMITIVE AMENORRHEA.

| | | | |
|---|---|---|---|
| Menstruation absent (emansio mensium). | No formation of decidua. | Uterus undeveloped or absent; Ovaries well or ill-developed or absent. | |
| | | Uterus well developed, but inactive. Ovaries, well developed. | Anæmia. Chronic disease. Bad hygienic conditions. Emotional shocks. Physical shocks. Acute diseases. Change of residence. Exposure. Bathing. Plethora. (?) |
| Menstruation scanty. | Scanty formation of decidua. | Uterus small. Ovaries well or ill developed. | |
| | | Uterus well developed. | Anæmia. Bad health. |
| Menstruation irregular and generally scanty. | Irregular and generally scanty formation of decidua. | Uterus usually small, but may be well-developed. | Anæmia. Bad health. |

## ACQUIRED OR SECONDARY AMENORRHEA.

- **Menstruation absent (suppressio mensium.)**
  - No decidua formed.
    - Uterus and ovaries well formed.
      - Anæmia.
      - Chronic disease of lung, liver, kidney, ovaries, uterus, or gastro-intestinal canal.
      - Bad hygiene.
      - Shocks, physical or emotional.
      - Acute diseases.
      - Blood-taint.
      - Exposure.
      - Bathing.
      - Change of residence.
    - Over-involution after labor.
    - Early menopause.

In place of the discharge of blood, there may be a leucorrhœa, more or less profuse.

It should never be forgotten that in not infrequent instances amenorrhœa, supervening apparently without cause, is the first sign of *phthisis*, and in all such cases should arouse the most active attention of the physician. Some writers hold that in these cases the amenorrhœa is not so much the sign as the exciting cause of the tuberculous change.

## DYSMENORRHŒA.

The forms and causes of dysmenorrhœa are defined by Prof. T. G. THOMAS, in accordance with the following table:

| *From.* | *Symptoms.* | *Causes.* |
|---|---|---|
| Neuralgia. | Pain usually sharp and fixed. | The neuralgic diathesis; plethora or chlorosis; malaria; theumatoria; onanism. |
| Dysmenorrhœa. | No expulsive pains; flow steady; no clots; no obstruction; occurs gradually; is habitual; no endometritis. | |
| Congestive or Inflammatory Dysmenorrhœa. | Pain severe, sudden; discharge lessens or ceases. General pyrexial signs, and inflammatory constitutional disturbance. | Exposure to cold and wet; tumors; mental disturbance, endometritis, etc. |
| Obstructive Dysmenorrhœa. | Pain sudden and accompanied with an expulsive effort after menstruation has commenced some hours ("uterine colic"); recurrence of these symptoms. Discoverable obstruction. | Contraction of cervix; uterine flexion; polypus or fibroid; obturator hymen. |
| Membranous Dysmenorrhœa. | Pains steady, becoming violent and expulsive; passage of membrane at each period; as sequelæ, endometritis and menorrhagia. Very rare. | ——— Early abortions; diphthertic endometritis. |
| Ovarian Dysmenorrhœa. | Pain, dull and sickening, usually precedes the flow several days, and lessens when it comes on. Breasts painful or tender. "Submammary pain." "Intermenstrual pain," occurring between the epochs. Ovaries often enlarged and tender. Pain habitual at each epoch; often shoots down the thigh. | Ovaritis; excessive nervous hyperæsthesia. |

BARNES says a characteristic sign of ovarian congestion is that the body of the uterus is drawn toward the affected ovary.

## MENORRHAGIA AND METRORRHAGIA.

By *menorrhagia* is meant an excessive flow of blood at the menstrual period; by metrorrhagia, a flow of blood between the menstrual epochs.

Neither of these forms of trouble can be called a disease, as they are solely symptoms of several kinds of uterine affection. In order to diagnose the cause, and thus obtain the indications for treatment, a careful examination becomes necessary. In most instances, it is the result of general debility, as from protracted nursing. Locally, it may be caused by the presence of tumors, as polypi, etc., affections of the os and cervix, congestion of the womb or ovaries, subinvolution of the womb, or inversion of that organ.

Debility as a cause is recognized by the usual symptoms, and the accompanying predisposing circumstances, as lactation, anxiety, exhausting labor, etc.

Polypi, when low down, are easily recognized by the finger, though the speculum may be used to confirm the diagnosis. In these cases there is leucorrhœa, more or less bloody, and at intervals discharges of pure blood, without relation to the period of menstruation. When a polypus is not found pendent in the vagina, the presence of these growths may be suspected above, as in the canal of the neck, or even within the uterus itself, and attached to the fundus. The absence of other causes of the hemorrhage would demand dilatation of the organ if necessary, and a careful search for these excrescences.

Subinvolution only occurs in women who have been pregnant. Here, the womb, after delivery has been accomplished, fails to return to its proper condition. The diagnosis is readily made by examination. The uterus is much larger than natural, the os soft and patulous; there are pains in the back, irritability of the bladder, frequent micturition, with tenesmic efforts, and generally very profuse leucorrhœa. These may end in erosion of the os and cervix, and added to these we may have congestion of the lips of the womb.

Again, hemorrhage may be due to the presence of a portion of the placenta, which is frequently the case after an abortion. This might be suspected from the history of the case, and the diagnosis fully made by an exploration with the sound, when the

foreign body is detected. In such cases there is generally a certain amount of odor, as of a decaying body, in the cavity.

In the unmarried, a spongy state of the cervix is generally a cause; this is shown by eversion of the lips, and granulations on the surface.

Malignant disease as a cause is detected by the general history; there has been more or less pain, often lancinating, in the lower part of the abdomen, the back, around the hips, and extending down the thighs, which frequently seems to be much relieved after profuse hemorrhage has occurred. This hemorrhage would occur from a slight exertion, or after coitus. Examination shows in advanced cases fixation of the uterus, hardness and irregularity of the parts. In early cases, these symptoms all exist, but to a less extent.

## CHLOROSIS AND ANÆMIA.

These two diseases, though not strictly synonymous, may, from their great resemblance, be treated of as one. A marked feature is amenorrhœa, or imperfect menstruation. The complexion is pale, or of a greenish yellow. The patient is listless, loses appetite, or only desires dainties, generally craves acids, or may even prefer articles of an injurious or loathsome nature; she is irritable, hysterical, suffers with headache, which is sure to come on after the slightest excitement or exertion. The poverty of the blood is shown by cold extremities, swelled feet and hands, puffiness of the face, dark rings around the eyes, and blowing sound of the heart. Though not always present, yet, in many instances, there are vague neuralgic stitches in the breasts, the head, the sacral region. In rare cases, after the disease has continued awhile, a slow fever sets in, which may lead to an error in diagnosis.

## THE CHANGE OF LIFE.

This period, known as the climacteric or menopause, varies greatly as to the time of its appearance. The woman menstruates for about thirty-five years, and then occurs a marked change, which may be sudden, or may slowly steal upon her. Most com-

monly this is attended by a variety of troubles, which to a greater or less extent affect the general health. A most frequent symptom is irregularity of the menstrual function. It ceases, perhaps, for months, and as suddenly re-appears. Or the flow becomes alarmingly profuse, exhausting the patient, draining her. With this may be associated hemorrhages from the nose, from the bowels, profuse leucorrhœa, and brain symptoms as of congestion, vertigo, frequent syncope, epileptic or apoplectic seizures. BARNES regards the headache as peculiar, chiefly occipital, involving the nucha and spinal cord. The mind is affected. There are irritability, loss of memory, despondency, even partial insanity, but all of which are generally acknowledged by the patient, and she regrets her want of self-control.

The appetite is capricious or lost, generally the bowels are obstinately costive, fat begins to accumulate, and these symptoms often give rise to the belief that the woman is pregnant, which is speedily dispelled by the proper examination. The liver and kidneys, in fact nearly every organ, are liable to become affected and to add to the general discomfort.

# OVARITIS, ACUTE, SUBACUTE AND CHRONIC.

### DR. L. DE SINETY, OF PARIS.

This author believes that true ovaritis, that is, an inflammation limited to the ovary, is excessively rare. Generally, what is so called is pelvi-peritonitis and lymphangitis. Patients should keep the bed, and take warm baths and continued vaginal injections. Local blood-letting and leeches to the abdomen are appropriate. Against the pain, chloral, chloroform and morphine, hypodermically, are required. The rectum should be emptied by enemas, the bladder by the catheter. If the tumor becomes fluctuating and points, it should be aspirated.

The chronic form is nearly always associated with anæmia, and will be benefited by iron and quinine. Preparations of iodine will also be found of good service; as:

| | | |
|---|---|---|
| 1. ℞. | Tincturæ iodinii, | gtt. iij. |
| | Aquæ, | ℥ j-ij. M. |

This amount three times a day.

This author doubts the existence of the alleged blenorrhagic, syphilitic, and rheumatismal forms of ovaritis, as also that it arises from onanism, excessive venery or menstrual suppression.

### PROF. ROBERT OLSHAUSEN, OF HALLE.[1]

Though opinions differ on the subject, this writer is of opinion that chronic oöphoritis is by no means rare, both among married and unmarried women of youthful years. Its cause is often excessive cohabitation or onanism; but it may follow an acute attack, the result of suppressed menses, metritis, etc.

All cohabitation, as well as fatigue, much walking or standing are to be forbidden. Local abstraction of blood from the uterus

1. *Handbuch der Frauenkrankheiten.* Edited by Billroth, part VI.

is occasionally useful. The most efficient internal remedies are *iodide of potash* and the preparations of *gold*. The latter was much lauded by NOEGGERATH, who claimed that in twenty-five cases he effected reduction of the swelling in from six to eight weeks by administering gr. ij. daily. OLSHAUSEN has not had such good results, but in some cases had witnessed decided benefit.

Anodynes, at the menstrual period, can often not be dispensed with, and blisters to the abdomen are at times useful. A local measure of unquestionable benefit is a moderate-sized soft rubber ring pessary. This fixes the uterus, and prevents dragging. When, however, there is prolapse of the ovaries it cannot be worn.

As a last resort the removal of the ovary by the operation of spaying has to be considered.

### PROF. J. MATTHEWS DUNCAN, LONDON. [1]

The writer observes that a great many cases of the chronic forms of ovaritis—which he esteems a very common disease—are almost incurable. When they resist a properly-conducted treatment, it is wisest to give up the attempt at cure.

In every case *rest* is demanded. In severer cases the patient should keep her bed; marital relations should be suspended, and especially at the menstrual period should repose be enjoined. In many cases, *leeches* applied to the neck of the womb or over the inguinal canal, are very valuable. Of medicines, the most to be relied upon are *corrosive sublimate*, *iodide of potash*, and *bromide of potash*. *Blisters* over the inguinal ring are frequently of decided advantage in chronic cases. Croton oil or antimonial liniment may be applied to the inguinal canal adjacent to the affected gland.

### PROF. GRAILY HEWITT, M. D., OF LONDON.

In acute cases, entire *rest* is essential. When the attack is

1. *Lectures on Diseases of Women*, 1880.

owing to a chill, from exposure, leeches should be applied over the ovaries, followed by hot anodyne poultices. Hot turpentine stupes are also valuable.

In chronic cases, cold affusions and hip baths are often useful. Sexual indulgence must be strictly limited. At the menstrual periods the patient should remain on the couch, and a stimulating nourishment be avoided. Between the epochs moderate out-door exercise is valuable. Tartar-emetic ointment or other counter-irritants may be used over the ovary. To relieve pain the following pill is efficacious:

| | | | |
|---|---|---|---|
| 2. ℞. | Pulveris opii, | gr. ss. | |
| | Extracti cannabis indicæ, | gr. ½. | |
| | Camphoræ, | gr. j. | M. |

For one pill, night and morning.

### EDWARD JOHN TILT, M. D., OF LONDON.

In severe ovario-uterine pain, this practitioner recommends placing a pledget of cotton-wool, soaked in laudanum, or acetate of morphia, near or upon the neck of the womb. This may be repeated daily or every other day. Two or three grains of morphia may be used at a time in this manner.

When the ovaries are congested or inflamed, the best method of treatment is to *leech the womb*. Four leeches may be applied to the cervix a day or two after the flow has ceased. The effect is usually well marked. Blisters and ointments to the hypogastric region only act on the ovaries indirectly, and even double the number of leeches mentioned, when applied over the ovary, do not produce so permanent an effect.

In chronic and obstinate forms of ovario-uterine disease, silk setons applied above the pubes, as recommended by HUGUIER, deserve trial.

For the pelvic and spinal pains of ovario-uterine disease, Dr. TILT recommends rubbing the surface twice a day with one of the following ointments:

| | | | |
|---|---|---|---|
| 3. ℞. | Linimenti belladonnæ, | f. ʒ ij. | |
| | Glycerinæ amyli, | f. ℥ j. | M. |
| 4. ℞. | Morphiæ acetatis, | gr. x. | |
| | Glycerinæ, | f. ʒ ss. | |
| | Otto rosar., | gtt. j. | |
| | Unguenti petrolei, | ℥ j. | M. |
| 5. ℞. | Potassii iodidi, | ʒ j. | |
| | Magnesiæ, | gr. v. | |
| | Otto rosar., | gtt. j. | |
| | Aquæ, | f. ʒ j. | |
| | Unguenti petrolei, | ℥ j. | M |

Apply twice daily.

| | | | |
|---|---|---|---|
| 6. ℞. | Atropiæ sulphatis, | gr. ij. | |
| | Morphiæ sulphatis, | gr. iv. | |
| | Olei olivæ, | f. ʒ j. | |
| | Olei lavandulæ, | gtt. x. | |
| | Unguenti hydrargyri fortis, | ℥ j. | M. |

A piece about the size of a small walnut is to be rubbed in morning and evening, over the sensitive ovary.

J. WARING CURRAN, M. D., LONDON.

*Ovarian Neuralgia.*—This writer maintains that in various instances we meet with true *ovarian neuralgia*, independent of any local lesion, and more remediable by constitutional than by local treatment. He identifies it with the *ovarian irritation* of Dr. CHURCHILL. His prescription for such cases is:

| | | | |
|---|---|---|---|
| 7. ℞. | Ammoniæ muriatis, | ʒ ij. | |
| | Tincturæ aconiti, | f. ʒ ij. | |
| | Syrupi aurantii corticis, | f. ℥ viij. | M. |

A teaspoonful thrice daily in the treatment of *ovarian neuralgia.*

Dr. CURRAN states that this combination has almost a magical influence in many cases. He reports (*Medical Press and Circular*, August 9th, 1868,) six cases in which various sedatives and anodynes had been tried in vain. In all he found that before the above mixture was finished by the patient, the pains had entirely ceased.

Dr. T. J. NEWMAN, of Chicago, confirms the usefulness of this mixture, and records (in the *Chicago Medical Examiner*, for

November, 1869,) three cases of neuralgia of the ovaries treated by it with success, after the failure of other remedies.

In the same painful complaint, Dr. ROBERTS BARTHOLOW has obtained excellent results from the following recipe:

| | | | |
|---|---|---|---|
| 8. ℞. | Extracti belladonnæ, | gr. iv. | |
| | Extracti stramonii, | gr. v. | |
| | Extracti hyoscyami, | gr. v. | |
| | Quiniæ sulphatis, | ʒij. | M. |

Make twenty pills. One three times a day, in ovarian neuralgia and neuralgic dysmenorrhœa.

### DR. J. MILNER FOTHERGILL, OF LONDON.

*Ovarian Dyspepsia.*—This writer has pointed out that a frequent complication and often the most prominent symptom of subacute ovaritis is a form of gastric atony which he calls "ovarian dyspepsia." (*American Journal of Obstetrics*, January, 1878.) For the treatment of such cases he recommends as the great therapeutic agent, the *bromide of potassium.*

| | | | |
|---|---|---|---|
| 9. ℞. | Magnesiæ sulphatis, | ʒj. | |
| | Potassii bromidi, | ʒj. | |
| | Infusi gentianæ, | f.ʒj. | M. |

This amount three times a day, with an aloes and myrrh pill at bed-time, if necessary.

A blister should be applied over the tender ovary.

For the vaginal loss, injections of astringents in solutions by means of a Higginson's syringe, or the small india-rubber ball and tube used to give babies enemata (much better in every way than a glass syringe), must be used twice a day, with hip-baths daily, if the patient's condition will admit of it. This is far from unimportant. When there is menorrhagia, quietude and the avoidance of all warm drinks and food during the flow are desirable. For the imperfect digestion, light and easily digestible food, milk, if necessary, combined with an alkali, or beef tea with a little cream in it, or custard, are indicated. Such food should be given at short intervals, and small quantities at once.

The irritable stomach will often retain small quantities of food when larger amounts are at once rejected.

### LAWSON TAIT, F. R. C. S., BIRMINGHAM.

This writer (*Diseases of Women*, 1879,) divides inflammatory affections of the ovaries into (1) ovarian hyperæmia, (2) acute ovaritis, (3) chronic ovaritis.

*Ovarian Hyperæmia.*—This is frequently met with in young girls and in young married women with vigorous husbands, and in prostitutes of tender age. The patient should rest in a prone position for a few days before, during, and after the menstrual period; a counter-irritant should be placed over the ovarian region just before the flow is expected; and she should take *ergot* before and during the period, and the salts of potassium continuously during the intermenstrual time. His favorite formula is:

10. ℞. Ergotinæ (Bonjean), gr. ss.
Lupulinæ, q. s. M.
For one pill.

In addition to this, between the epochs,

11. ℞. Potassii bromidi, gr. v–x.
For one dose, night and morning, after meals.

All cases of ovarian hyperæmia which Mr. TAIT has met with at puberty, have yielded to this treatment, and most of those of a later age.

*Acute and Chronic Ovaritis.*—No time can be laid down where ovarian hyperæmia passes into ovaritis, nor between the acute and chronic forms of the latter. The treatment should consist of local and systemic rest, and the administration of ergot. Locally, counter-irritation in the inguinal region, with linimentum iodi every morning until the spot is sore, and this repeated frequently, will nearly always do good. Bromide of potassium may be combined with the ergot. Arsenic and cod-liver oil are also useful, and some cases will yield to large doses of quinine, when everything else has failed.

## RÉSUMÉ OF REMEDIES.

*Ammoniæ Murias* is often efficient in ovarian neuralgia. (F. 7.)

*Antimonii et Potassi Tartras.* Counter-irritation by means of tartar emetic ointment is of service in subacute ovaritis.

*Atropia,* hypodermically, $\frac{1}{120}$-$\frac{1}{60}$ grain in ovarian neuralgia. Belladonna in plaster is often of service.

*Brominium.* BARNES says that this agent seems to possess a specific power in diminishing ovarian irritation.

*Camphora* is very serviceable in ovarian pain. (F. 2.)

*Hydrargyri Unguentum.* Dr. E. J. TILT, of London, recommends in subacute ovaritis:

| | | | |
|---|---|---|---|
| 12. ℞. | Unguenti hydrargyri, | ℥ ij. | |
| | Extracti belladonnæ, | ℥ j. | |
| | Ceræ, | ℥ ij. | |
| | Adipis, | ℥ j. | M. |

Warm water enemata, and gentle aperients (castor oil), should accompany the treatment.

*Iodinium.* Painting the sensitive regions with tincture of iodine is a useful means of counter-irritation.

*Opium.* Vaginal suppositories of opium gr. ij., made up with paraffin, frequently give great relief. ARAN was accustomed to pour two drachms of laudanum daily or every other day, through a speculum, on and into the cervix.

**Potassii Bromidum.* This agent is asserted to possess almost specific powers in reducing ovarian irritation, and pain, nymphomania, etc. (F. 9.)

*Potassii iodidum* is of decided value. (F.5 and p. 39.)

*Potassa cum Calce.* In chronic ovaritis, BARNES recommends as a means of derivation, setting up a small issue or eschar on the vaginal portion of the uterus with this agent.

*Terebinthinæ Oleum,* used in the form of hot epithems, is frequently available.

*Veratria.* Dr. L. ATTHILL has seen great relief from the local application of equal parts of the ointment of veratria and iodide of potassium.

GENERAL METHODS.

*Blisters* over the ovarian region are frequently of service in the subacute forms.

*Enemata.* Warm water enemata, retained as long as possible, are often of great benefit.

*Ice* applied in a bag to the painful spot, is said by Dr. TILT to relieve the pain of acute ovaritis.

*Leeches* are a very valuable means of relief. (See p. 40.)

*Pessaries.* A light pessary, to support the womb and keep the ovaries in their normal position, will often prove of decided advantage.

*Ovariotomy.* As a last resource in severe ovaritis, the organs may be removed by BATTEY'S operation.

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# OVARIAN TUMORS

The medical treatment of tumors of the ovaries embraces:

Internal medication.
Injections into the sac.
Electrolysis.

*Internal Medication.*—It has been believed by some practitioners that a prolonged use of *muriate of ammonia* has led to atrophy, absorption and disappearance of certain benign ovarian tumors. Two such cases are recorded at length by Dr. E. H. W. HUNTER, in the *Trans. of the Georgia State Med. Soc.*, 1877. He gave gr. xx. of the muriate, four times daily. In ovarian dropsy, the free use of *chlorate of potassium* is said to have resulted in marked diminution of the contents.

PROF. E. R. PEASLEE, M. D., NEW YORK,

Believed that, in several instances, the growth of ovarian cysts had been checked by the application into the vagina, of *iodide of lead.* The ointment may be smeared on a cotton tampon, and

introduced from time to time. Care must be exercised that too great irritation is not excited.

*Injections into the Sac.*—The substance usually employed for this purpose is *iodine*. Some surgeons use the pure tincture. Dr. BOINET, of Paris, employs:

| | | | |
|---|---|---|---|
| 13. ℞. | Tinct. iodinii, | f.ʒ iij. | |
| | Potassii iodidi, | ʒj. | |
| | Acidi tannici, | ʒ ss. | |
| | Aquæ destillatæ, | f.ʒ iij. | M. |

He injects the whole of this amount, brings it in contact with the entire surface of the sac by gentle agitation, and then withdraws it.

Prof. T. GAILLARD THOMAS recommends as the best procedure to empty the sac by the aspirator, and without withdrawing the needle, fill it with tincture of iodine, and in ten minutes draw it off. He would confine this plan of treatment only to a late period, in cysts of moderate size, with few compartments, and containing a fluid which is not very viscous.

*Electrolysis.*—Within the last few years, great attention has been given, especially in Germany, to the dispersion of ovarian tumors by electrolysis, and it was at one time confidently announced that this plan would supersede ovariotomy.

Further observations show that while in many instances electricity, properly applied, will reduce the tumors very materially, the effect of the agent is temporary, and it is very doubtful whether any permanent and real benefit accrues from the procedure. In Vienna, the electrolytic treatment has been carefully and repeatedly tested, and it is now wholly neglected as of no avail. (See *Am. Jour. of Obstetrics*, Oct., 1878.)

### EPHRAIM CUTTER, M. D., BOSTON,

In a report to the *Amer. Med. Ass'n*, in 1879, says it is dangerous to operate on a person suffering with albuminuria. He regards it as proved that the results obtained are due to the passage of a current, and not solely to puncture. With Dr.

KIMBALL, he has operated on sixty-one cases. In one case, the fibroid was extracted from the vagina fifty-three days after the application. In a similar case there was a small, nodulated mobile fibro-myoid attached at and incorporated with the fundus. The os was ulcerated, and the operation was advised to arrest the hemorrhage. A current was applied for seven minutes. Two months after, no tumor could be felt, and the os was healed. In one case, an electrode was applied per vaginam, and the circuit was completed by a sponge electrode over the pubis, but with such alarming results that the procedure was shown not to be safe. It is best to confine the action of the current to the tumor, as it alone is in fault, and needs the whole force. This is effected by complete insulation of the needle in the healthy tissues.

### DR. L. DE SINETY

The medical treatment of ovarian tumors should be directed rather to supporting the general system and relieving dyspeptic symptoms, than with the hope of dissipating the tumor. Mercury, iodide of potassium, compression, massage, thermal waters, electricity, electro-puncture, ergotin hypodermically, etc., have been employed, and occasionally diminution of the tumor or even its complete disappearance reported; but the same means employed by others have not yielded any such beneficial results.

The surgical measure are the only ones to be relied upon. These are—

1. Puncture.
2. Drainage.
3. Ovariotomy.

It should not be forgotten that occasionally a *simple puncture will bring about a complete cure of an ovarian cyst* (instances by PANAS, *Archives de Tocologie*, 1875.) Usually the puncture is associated with an iodine injection, as:

| | | | |
|---|---|---|---|
| 14. ℞. | Aquæ destillatæ, | f. ℥ v–vij. | |
| | Tincturæ iodinii, | f. ℥ iij. | |
| | Potassii iodidi, | ʒj. | M. |

Out of one hundred and thirty cases operated upon in this manner by Dr. BOINET there were sixty-four recoveries. But it only succeeds in unilocular tumors where the fluid contained is clear and limpid.

Prof. COURTY, in 1866, reported a case which he believed he succeeded in curing by inunction of iodine, general tonic measures, and especially the prolonged administration of *gold oxide.*

The *bromide of potassium* in moderately large doses has been alleged by several writers to have had the effect of reducing and dispersing the tumor.

When one considers the anatomy of most of these cysts, such claims cannot but appear groundless, as a dispersion of them by medical measures is hardly conceivable. Probably the tumors or enlargements which diminished under such medication were not ovarian cysts at all, but belonged to the products of chronic inflammation, dropsy, etc.

The *hygienic and dietetic treatment* of such cases is of great importance. Nothing should be undertaken which will depress the physical forces, and everything should be avoided which will stimulate the irritability of the ovaries. The diet should be light, and digestion and assimilation favored by fresh air and exercise. During the menstrual period the patient should keep her bed, especially when the flow is profuse. Sexual excitement should be discountenanced and pregnancy positively warned against.

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## AMENORRHŒA

JOHN WILLIAMS, M. D., LONDON.

Referring to the classification of the forms of amenorrhœa already given (see page 32), this writer suggests the general line of treatment as follows (*Lancet*, May 26th, 1877):

*Menstruation is and always has been absent.* The great ma-

jority of cases of this class which will come under observation will be young girls between sixteen and twenty years of age. Many of them will suffer from anæmia and disorders of the digestive organs. Such cases are instances of late or tardy evolution of the generative organs. The form and figure may be well developed, but the uterus grows slowly, and the treatment consists in waiting and adopting all means that favor its growth. There will, after all, remain a few in which the discharge will not make its appearance. In these it will be found that the uterus is small, and the best treatment is non-interference.

*Menstruation is scanty or irregular.* If it be due to an undeveloped condition of the uterus, and if it be accompanied by no pain, the general health being good, it requires no special treatment. General means which favor physical development, as exercise of all kinds, may be recommended. If the uterus have obtained its full size, there will, in almost all cases, be found a disordered state of the general health. The most common condition is anæmia. In such cases the physician should regulate the bowels, for there is generally constipation, and give iron, iodine, salines; good diet, fresh air, and exercise in the open air, are essential. Exercises of all kinds are good—riding, walking, swimming, dancing. If the monthly molimen be present, emmenagogues may be prescribed, but they should never be administered when indications of ovarian and uterine action are present. The medicines supposed to have a direct action in bringing on the menses are numerous, but few of them are of much or even of any value. The best are *electricity, aloes*, and the stimulating diuretics—nitrous ether, spirits of juniper, and oil of turpentine. Hot hip-baths for five or six nights in succession before the expected return of the molimen are useful. Guaiacum, ergot of rye, oil of savin, cantharides, have proved successful in the hands of some. Dr. ATTHILL recommends the warm hip-bath for eight or ten evenings in succession before the expected time.

*Suppression of the menses.* When the suppression has taken place suddenly during a menstrual flow, the patient should have

a hot bath, go into a warm bed, and take a dose of Dover's powder. A stimulating diuretic or a diaphoretic should be at the same time prescribed. Should fever, heat in the skin, vomiting, pain in the abdomen, and symptoms of local inflammation or of general peritonitis set in, they should be treated irrespective of the suppression. If the flow is not re-established, the case becomes one of chronic suppression.

*Chronic suppression.* The general health should be attended to, and if menstrual molimina be present they should be encouraged, and efforts made to establish the flow by the means already enumerated. If molimen be absent, we must limit our aid to the treatment of the general health.

### PROF. R. J. GRAVES, M D., DUBLIN.

This author observes, in his *Clinical Lectures*, that the periodicity of the function of menstruation can still be traced, even in cases where suppression has continued for a great length of time, by means of the menstrual molimina (pains in the loins, thighs, and hypogastric region, flushing, colicky pains of the abdomen, general feeling of *malaise*,) which occur at stated intervals; in endeavoring to bring on the discharge, therefore, we must be guided as to the time the attempt should be made, by an observance of the period at which these molimina occur. For a few days before that time, our efforts to produce a determination of blood to the uterus may be judiciously employed; and if they fail, the attempt should be abandoned until a few days before the next menstrual period. Of course, however, the general constitutional treatment must be constantly persevered in; one of the chief means of bringing back this evacuation being the restoration of health to the natural standard. But all such remedies as pediluvia, stuping of the genitals, leeches to the inside of the thighs, near the labia, aloes and other stimulative purgatives, etc., should be only used at the times spoken of. To use them at any other period, either after the molimina have disappeared, or during the intervals between them, tends, in

most cases, still further to derange nature, by determining to the uterus at an unseasonable time, when there is no natural tendency to that organ. Under such circumstances, the very same means fail and prove injurious, which, applied so as to coincide with the time of the natural effort, would have been successful.

To illustrate these principles by an example. We are consulted in the case of a young woman affected with various hysterical symptoms for several months, and during that period more than usually subject to headache, languor, loss of spirits, diminution of appetite and irregularity, and usually constipation of bowels; she is pale, and complains of various pains and uneasy sensations, and has not menstruated since the appearance of these symptoms. Here it is evident that the constitutional treatment must be strengthening and tonic. The practitioner will, therefore, recommend regular hours, much exercise in the open air, a nutritive diet, and afterward cold shower-baths; he will regulate the bowels, and afterwards prescribe a course of tonic medicines, chalybeates, preparations of bark, strychnia, etc.; he will likewise inquire carefully when the last period happened, and where, and how often since that occurrence menstrual molimina were observed. He thus ascertains when they should again recur, and contents himself with enforcing the constitutional treatment until about six days before the calculated time. Then he lays aside the other medicines, and has recourse to those means which determine to the uterus. Two leeches are applied to the inside of the thigh, near the labium, every second night, until they have been three times applied. The bleeding is encouraged by stuping. On the intermediate days the bowels must be actively moved by aloetic pills; and for three nights before and after the molimina, hot pediluvia, rendered stimulating by mustard seed, may be used. During the same time, also, frictions, with stimulating liniments, should be applied to the feet and legs every morning, and oil of turpentine or tincture of cantharides may be exhibited internally, while the necessity of more active exercise is inculcated. If these means fail, they must for the moment be laid aside, and the constitu-

tional treatment must be again resumed, until the same number of days before the next period, when the list of remedies above spoken of must be again tried, and in few cases indeed shall we find them to fail.

### PROF. T. GAILLARD THOMAS, M. D., OF NEW YORK,

In cases of rudimentary or atrophied uterus, suggests local stimulation and distention. Every week or two it should be distended by a tent. In the intervals, an intra-uterine galvanic pessary should be worn. This, however, requires time. After general treatment, in cases of anæmia, etc., he uses other local stimulation by dry-cupping the cervix uteri. Electricity is of value. One pole of the battery may be placed over the lower part of the spine, and the other either passed over the hypogastrium, or brought in contact with the neck of the womb; or it may be carried within that organ by means of a wire covered with a gum catheter.

### E. J. TILT, M. D., OF LONDON,

Advises a couple of aloes and myrrh pills each night, to produce moderate alvine action; the legs placed in a pail of hot water on rising, and a warm hip-bath at night; mustard to the inner parts of the thighs and breasts on alternate nights; the breasts dry-cupped, or rubbed with a stimulating liniment. On retiring, a linseed meal poultice as hot as can be borne to the lower part of the abdomen. These measures are to be tried for three days, and again after an interval of twenty-one days, and in the interval, a chalybeate is to be taken, and a bit of piline sprinkled with alcohol to be worn during the day over both ovarian regions. This he continues for three or four months. Occasionally, during the three days, he gives a mixture of acetate of ammonia, chloric ether, and fluid extract of ergot. When the head is much distressed, he applies six leeches to the labia, followed by a hot hip-bath, or a hot poultice to the labia.

He offers the following:

15. ℞ Oil of savin, f. ʒ j.
Spirits of nitrous ether, f. ʒ iij.
Mucilage, f. ℥ j.
Water, ad f. ʒ vj.

Shake well. Dose.—A teaspoonful every two hours, when the patient is half comatose from suppressed menstruation.

Or,

16. ℞. Tincture of ergot, f. ʒ ij.
Syrup of saffron, f. ℥ ss.
Comp. decoction of aloës, f. ʒ iss. M.

Dose.—A teaspoonful three times a day.

He recommends the association of podophyllin and aloes, in pills, for the same purpose.

### PROF. ROBERT BARNES, OF LONDON,

Thinks that the blood is in want of salines as well as of iron, and that this is the first want. He gives solution of acetate of ammonia, adding a little nitrate of potassa, and a light tonic, as hop, chinchona or calumba. He employs iron in the form of the ammonia-citrate, the solution of the acetate, or the dialyzed iron. Between salines and iron, he would give iodide of potassium in doses of five grains three times a day. He believes that the restorative power of iron is much increased by the addition of strychnine or ergot.

### PROF. J. B. FONNSAGRIVES, OF PARIS.

This learned author divides amenorrhœa, for the treatment, into the following classes:

1. *Plethoric amenorrhœa.* Local and general bleeding, the resinous purgatives, and low diet, are here indicated. SIREDEY recommends in addition *bicarbonate sodium*, gr. v. daily, two or three days before the period; or solution of the acetate of ammonia.

2. *Nervous amenorrhaœ*, characterized by a condition of general nervous erethism. RACIBORSKI in such cases gives twenty to thirty drops of the solution of *acetate of ammonia*, in hot water, several times daily, for three or four days before the period, and also has recourse at times to ergot and *vaginal fumigations* with carbonic acid gas.

3. *Tuberculous and scrofulous amenorrhœa* require the general treatment of dyscrasiæ.

4. *Amenorrhœa by counter-fluxion.* This arises when some other organ, by reason of its congestion, checks or prevents the normal uterine molimen of the menses. In such cases the attention of the practitioner must be directed to removing the congested condition of the interfering organ

### DR. EMIL DILLENBERGER, VIENNA.

Treatment demands the removal of those errors and lesions which lie at the bottom of the malady. If the amenorrhœa consists of some anomaly of the sexual organs, congenital or acquired, and such as cannot be remedied, or in some other irremediable malady, treatment is useless. If menstruation has been already established, the physician must convince himself, by a careful examination, whether or not pregnancy is the cause of the cessation of the periods. Internally are used aloes and myrrh, as follows:

| | | | | |
|---|---|---|---|---|
| 17. ℞. | Pulveris aloës, | | gr. lxviij. | |
| | Pulveris myrrhæ, | | gr. xxxiv. | |
| | Extracti glycyrrhizæ, | | q. s. | M. |

For sixty pills. Two to four pills two or three times a day.

| | | | | |
|---|---|---|---|---|
| 18. ℞. | Pulveris aloës socotrinæ, | | | |
| | Pulveris myrrhæ, | āā | gr. xlviij. | |
| | Croci sativi, | | gr. xxxiv. | M. |
| | Extracti glycyrrhizæ, | | q. s. | |

For ninety pills. From four to six twice a day.

Or, savine, as follows:

| | | | | |
|---|---|---|---|---|
| 19. ℞. | Pulveris frondis sabinæ, | | | |
| | Sacchari albi, | āā | gr. xxxiv. | |
| | Olei menthæ piperitæ, | | gtt. iij. | M. |

Divide into six powders. One to be taken three times a day.

20. ℞. Olei sabinæ, gtt. vj–xij.
Sacchari albi, gr. lx. M.

Divide into six equal powders. Put in waxed paper. Take one powder three times daily.

21. ℞. Pulveris frondis sabinæ, gr. lxviij.
Croci satavi, gr. xxij.
Olei sabinæ, gtt. viij.
Extracti gentianæ, q. s. M.

For sixty pills. From three to five pills two or three times daily.

Or, direct crocus and borax, as follows:

22. ℞. Boracis venalis, gr. xxxiv.
Croci sativi, gr. xiij.
Sacchari albi, gr. xxij.
Olei menthæ piperitæ, gtt. j. M.

Divide into six powders. One powder three times a day.

Amenorrhœa is often more certain to be cured by putting an end to serous or bloody discharges from various organs, by treating for an improved condition of the blood, with good nourishment and a corresponding regimen, with iron, preparations of cinchona, cold washing, etc., than by the employment of emmenagogues without any plan.

For outward application the following are useful: Warm uterine douche; brushing the mouth of the womb with tincture of iodine; leeches to the portio vaginalis uteri, to the labia pudendi, to the inner side of the thighs, or to the perinæum; dry cuppings and mustard poultices to the inner side of the thighs; warm, stimulating foot-baths, with mustard, salt, potash, or aqua regia; warm sitz-baths, or half-baths; bath at Ems, etc. In many girls marriage is the first thing that regulates the menstruation.

### DR. FRITZ, OF PARIS.

This writer gives the following directions in the *Union Médicale*, No. 151, 1878. If the flow has been suppressed by the patient's catching cold, warm hip-baths, vapor-baths, and stimulating foot-baths will be found useful. The patient must be

well covered with warm clothing, and take sudorific drugs and stimulants, such as ether, acetate of ammonia, or infusion of lime blossoms. Hot fomentations must be applied to the lower part of the abdomen and the genital organs, and mustard plasters to the inner surface of the thighs; cupping might be advisable instead of mustard. Stimulating injections will also be found very useful.

This treatment has to be continued for some days, and renewed when the next period is due. If the patient is plethoric, and congestions have been determined in the pelvic organs by the suppression of the period, leeches must be applied to the perinæum, the labia, or the thighs cupped, and if the patient be constipated, a purgative must be given. If the suppression be caused by some moral cause, and the woman is excitable, the nervous system must be treated with antispasmodics and sedative drugs.

HOSPITAL OF THE UNIVERSITY OF PENNA., PHILADELPHIA.

In amenorrhœa from anæmia and chlorosis, the following prescription embodies the hospital practice:

23. ℞. Pulv. ferri sulphat.,
Pottasii carb. puræ, āā ʒ ij.
Mucil. tragacanthi, q. s. M.
Div. in pil. No. 48.
To be given daily in doses gradually increasing, until three pills are taken after each meal.

This gives the large quantity of twenty-two and a half grains of the dried sulphate of iron per diem.

To counteract the possible costive effect of the sulphate of iron, this aperient mixture is given:

24. ℞. Pulv. glycyrrhizæ rad.
Pulv. sennæ, āā ʒ ss.
Sulphuris sublim.,
Pulv. fœniculi āā ʒ ij.
Sacchar. purif. ʒ iss. M.
One teaspoonful in half a cupful of water at bed-time.

Where the disease is due to torpidity of the ovaries, this prescription is used:

25. ℞ Ex. aloës, ʒj.
Ferri sulphat. exsic., ʒij.
Assafœtidæ, ʒiv.

Sig.—One pill after each meal. The number to be gradually increased to two and then to three pills after each meal. If the bowels are at any time over-affected, return to the initial dose of one pill after each meal.

### DR. L. DE SINETY, OF PARIS.

Little confidence can be placed on the so-called emmenagogues. Iron, when the amenorrhœa depends on chlorosis, mercury and iodide of potash, when syphilitic symptoms are present, and cod-liver oil in phthisical cases, will often bring back the flow. Where excessive adiposity is present, a diet of lean meat, green vegetables, with abstinence from fluids, bread and other farinaceous substances will be effective. Once or twice a week a purgative of scammony or salines should be administered.

When there is a sluggishness of the utero-ovarian apparatus, the resources are a good hygiene, light gymnastics, open-air exercise, cold and hot douches, hot sitz-baths, and sinapisms to the mammæ and inside of the thighs.

Catheterism of the uterine cavity, and intra-uterine pessaries, advocated by some, are modes of treatment with which this author expresses little sympathy; while electrization, on the other hand, either with the faradic or direct current, he has seen produce positively beneficial results. The current should pass from within the vagina to the external abdominal wall.

### PROF. COURTY, OF PARIS.

26. ℞. Pulv. rutæ,
Pulv. sabinæ,
Pulv. ergotæ, āā gr. ¾.
Pulv. aloës, gr. ½—¾. M.

For one pill.

Of these, thirty are ordered, and three are taken the first day six the second day, and nine the third day, always in three doses

They are suited for cases of idiopathic amenorrhœa, without great reaction on the economy, and when there is reason to suppose that the suppression of the menses is due either to an insufficient determination towards the genital organs, or to a difficulty of discharge due to inertia of the uterus. In order to encour age the influxion towards the genital organs, Dr. COURTY orders, before beginning the pills, foot baths, sitz-baths, and fumigations. He also applies leeches to the labia during the three days the pills are being taken. The pills generally induce colicky pains, and often a little diarrhœa.

## RÉSUMÉ OF REMEDIES.

*Achillea Millefolium* (*Yarrow.*) Dr. RONZIER-JOLY reports very successful use of this plant in amenorrhœa in tuberculous girls. He uses an infusion of the flowering tops, ʒiij. to aquæ Oj. STILLÉ believes that this plant possesses peculiar relations to the pelvic organs. It is especially called for where imperfect or absent menstruation depends upon a condition of atony in the reproductive organs.

*Aconitum* may be employed, in the form of the extract, with advantage in amenorrhœa. Dr. RINGER, of London, recommends it in the sudden suspension of the menses, as from cold.

*Aloes,* in a small enema, containing gr. x., employed at the proper menstrual period, is said to be a very certain emmenagogue. Dr. E. J. TILT, of London, recommends its internal administration combined with podophyllin. It is frequently combined with myrrh.

*Aloin.* Dr. TILT gives:

27. ℞. Aloin, gr. ij.
Cocoa butter, gr. x. M.
Make a suppository.

*Ammonii Murias,* in the hands of Dr. ANSTIE, in ten-grain doses, three times a day, in cases of amenorrhœa, marked rather by general feebleness than by anæmia, has occasionally seemed to conduce directly and considerably toward the cure. But of this, as of all

other emmenagogues, it is pre-eminently true that it is worth absolutely nothing if not exhibited precisely on the fit occasion.

*Ammoniæ Aqua* has been successfully employed in the form of injection into the vagina:

| | | | |
|---|---|---|---|
| 28. ℞. | Aquæ ammoniæ, | f. ʒj. | |
| | Lactis, | Oj.-ij. | M. |

To be injected into the vagina daily.

*Apiol* is highly recommended by Dr. JARET (*Bull. Gén. de Therap.*, August 15th, 1860,) and others since, as one of the safest and best of emmenagogues, not being even contra-indicated in incipient pregnancy. It is said to be especially adapted for cases attended with local or general nervous symptoms. A granule or "pearl" may be taken, gr. iv., four times a day.

*Argenti Nitras*, applied in substance lightly to the os uteri at the time of the expected appearance of the menses, has proved successful in obstinate cases.

*Artemisia Vulgaris.* The mugwort once enjoyed considerable reputation as an emmenagogue.

*Belladonna.* In plethoric amenorrhœa, belladonna is an efficacious remedy. It is quite popular on the continent, and recently Dr. F. T. PORTER, of Dublin, has reported marked success with it.

*Cantharides.* Dr. W. P. DEWEES placed much confidence in the internal use of tincture of cantharides, in doses of gtt. xx., gradually increased to gtt. xxxv. or xl. Dr. T. H. TANNER, of London, combined it with bromide of potassium.

*Cimicifuga* has been found an effectual remedy in some cases.

*Cocculus.* In nervous temperaments, with colicky pains, a few drops of the tincture several times daily, before the expected bow, will often relieve.

*Crocus Sativus.* The saffron as a stimulant aromatic has efficacy in functional amenorrhœa. The celebrated "Pills of Rufus" are composed as follows:

| | | | |
|---|---|---|---|
| 29. ℞. | Aloës, | gr. iss. | |
| | Myrrhæ, | gr. ʒ. | |
| | Croci, | gr. $\frac{1}{20}$. | |
| | Syrupi absinthii, | q. s. | M. |

For one pill; five to ten pills daily.

**Ergot* is recommended by Dr. TILT, of London (in doses of gr. v–x., in powder, two or three times a day.) He usually gives it in conjunction with other remedies:

30. ℞. Tincturæ ergotæ, ♏ xxx.
Syrupi croci, f.℥ ss.
Decocti aloës compositi, f.℥ iss. M.
A teaspoonful three times a day.

Or,

31. ℞. Liq. ext. ergot., f.ʒj.
Prepared lard, gr. iv.
Cocoa butter, q.s. ad. gr. xv. M.
Make a suppository.

**Ferrum Redactum*, and the other ferruginous preparations, are indispensable in the anæmia which constantly accompanies stoppage of the function.

*Galbanum* may frequently be combined, with benefit, with the salts of iron.

*Hydrargyri Chloridum Mite* is contra-indicated, if the patient be feeble, and is capable of doing much mischief in unsuitable cases. But Drs. GRAILY HEWITT, ASHWELL, and others, have found it a decided emmenagogue. Dr. HEWITT directs that on two successive nights, at the time of the expected period, a dose be given of five grains of calomel and six grains of aloes, followed by a seidlitz powder in the morning.

*Iodine* frictions over the abdomen have been found to give good results.

*Iodoform*, internally, has been recommended.

32. ℞. Iodoformi,
Ext. gentianæ, āā ʒj.
Pulv. gentianæ, q. s. M.
Make 100 pills. Three to six daily.

*Mentha Pulegium.* Pennyroyal has a popular reputation as an emmenagogue.

*Myrrh*, in combination with iron and aloes, is a standard remedy in amenorrhœa. Dr. TILT, of London, recommends the following so-called "Elixir of Paracelsus:"

33. ℞. Tincturæ myrrhæ, f.ʒ iv.
Tincturæ croci,
Tincturæ aloës, āā f.ʒ iij. M.
Dose.—ʒ ij.–iij. twice daily, in a little water.

***Potassi Bromidum.*** The value of bromide of potash in amenorrhœa, especially that connected with nervous and hysterical phenomena, neuralgia, ovarian irritation, scanty and painful menses, has lately been strongly urged by Dr. M. ROSENTHAL, of Vienna. (*Wiener Med. Presse*, No. 46, 1878.) He repeats it in full doses for some days before the menses begin.

***Pulsatilla*** is said by PHILLIPS to be of the greatest value in functional amenorrhœa, and that following fright or chill; gtt. j.–v. of the tincture three or four times a day. PINTSCHOVIUS recommends gr. j. of the extract thrice daily.

***Ruta Graveolens.*** The rue has been recognized as a direct emmenagogue since the time of Hippocrates. As it is a decided irritant of the intestinal canal, it must be given with caution. According to E. HAMELIN (*Dict. des Sciences Médicales*, 1877,) it is especially indicated where suppression is due to atony or inertia of the uterus. The powder is used by Dr. COURTY. (F. 26.) A better preparation is the essential oil. The following is from Dr. DUBOIS:

34. ℞. Olei rutæ,
Olei sabinæ, āā gtt. vj.
Sacchari, ʒ vij.
Rub together and add
Aquæ aurant. flor., f.ʒ iiss. M.
A dessertspoonful every hour.

A rectal injection of an infusion of rue, ʒj. to Oj., is occasionally serviceable.

***Sabina*** is considered by Dr. TILT, of London, as the most reliable of a very uncertain set of remedies. He has never seen any ill effects from its use, though he has given gtt. xx. of the oil twice a day. He orders:

35. ℞. Olei sabinæ, f.ʒj.
Spiritûs ætheris nitrosi, f.ʒ iij.
Mucilaginis, f.ʒj.
Aquæ, f.ʒ vj. M.

A teaspoonful every two hours, the bottle being previously shaken. A plaster containing the oil may also be worn over the ovarian region.

PEREIRA, HOME, PHILLIPS, LOCOCK, and Sir CHARLES CLARKE, all testify to its efficacy.

*Sanguinaria.* R. BARTHOLOW, M. D., regards *sanguinaria* as a positive emmenagogue. He uses the following:

| | | | |
|---|---|---|---|
| 36. ℞. | Tinct. sanguinariæ, | f℥ ij. | |
| | Tinct. aloës, | f.℥ ss. | |
| | Tinct. nucis vomicæ, | f.℥ ij. | M. |

Twenty drops two or three times a day in amenorrhœa of anæmia.

Or,

| | | | |
|---|---|---|---|
| 37. ℞. | Sanguinariæ, | gr. ij. | |
| | Ext. aloës, | gr. x. | |
| | Ferri redacti, | ℈ j. | M. |

Ft. pil. No. xx.

One pill three times a day.

*Senega* was first recommended as an emmenagogue by Dr. HARTSHORNE, of Philadelphia. He gave a pint of a saturated decoction daily during a fortnight before the expected appearance of the discharge.

*Sinapis.* A hot mustard hip-bath is often useful, the patient remaining in it for an hour each time.

*Sodii Biboras.* Dr. COPLAND recommends the following:

| | | | | |
|---|---|---|---|---|
| 38. ℞. | Sodii biboratis, | | ℥ ss. | |
| | Aloës socotrinæ, | | | |
| | Pulveris capsici, | āā | gr. xx. | |
| | Olei lavandulæ, | | q. s. | M. |

Make eighteen pills. Take two thrice daily.

*Strychnia.* Small doses of the extract or alkaloid of nux vomica, combined with aloes and myrrh, are sometimes of service.

*Tanacetum* has a popular reputation.

*Terebinthinæ Oleum.* Turpentine enemata have been given with success:

| | | | |
|---|---|---|---|
| 39. ℞. | Oil of turpentine, | f.℥ ss. | |
| | Barley water, | O j. | M. |

For one enema, to be given once or twice a day.

*Zingiber.* Hot ginger tea is a popular remedy for suppression from cold.

### GENERAL MEASURES.

*Electricity.* This agent has been found useful in various instances. In chronic suppression, Dr. P. S. HAYES, of Chicago, places one of the electrodes alternately over each ovary and the uterus, the other electrode over either sacro-iliac synchondrosis, the current being frequently reversed. (*Chicago Medical Examiner*, Jan., 1875.) Dr. JULIUS ALTHAUS considers the most effective form of applying electricity in amenhorrhœa to be the induction of catelectrotonus of the ovaries. (*Medical Times and Gazette*, March 14th, 1874.) He places the negative electrode of the constant battery, alternately to the right and left ovarian region, putting the anode alternately to the lumbar spine and to the os uteri by means of an insulated sound. The action should be kept up for fifteen minutes at a time, and repeated daily about the period the molimen should recur. The late Sir JAMES SIMPSON was accustomed to use, with advantage, an intra-uterine galvanic or zinc and copper pessary, in the treatment of amenorrhœa, the result of imperfect development of the uterus.

*Leeches.* TROUSSEAU strongly recommended leeches. His method of using them was peculiar. He placed a single one, or at most two, on the thigh or knee at the time the menses were due. As soon as the leech fell, he arrested the bleeding, so as to promote congestion of the surrounding tissue. Sometimes, he asserts, the menstrual pains begin almost as soon as the bleeding is thus checked.

*Massage.* This is appropriate in cases of suspended menstruation. Dr. DOUGLAS GRAHAM, of Boston, has given some illustrations of its successful employment. (*Boston Medical and Surgical Journal*, Feb., 1876.) The mode of procedure is manipulation of the whole body, with percussion of the back, resisting movements of the feet, legs and thighs, in all their natural directions; this being repeated daily.

*Milk Diet.* A strict skim-milk diet has been found successful by Prof. TARNIER, of Paris, in several cases of amen-

orrhœa in obese young women. With the disappearance of the extra fat, the menses returned.

*Baths.* Sitz-baths or foot-baths, using salt water or mustard water, are often sufficient where there is suppression following exposure. The mustard should be placed in a linen bag and soaked with occasional pressure in the water, until the latter receives a greenish color. The time of the bath should be fifteen to twenty minutes. ATTHILL especially commends the *cold hip-bath.* He directs the patient to sit in a bath containing cold water, so as to cover the pelvis, the legs and feet not being immersed, but kept warm by coverings of flannel, or by a pan of hot water. The temperature of the bath should be about 60°; taken at bedtime, and for a period of from five to fifteen minutes; after which the patient should be well rubbed with a coarse towel, and put to bed. Chilliness must be obviated by a hot jar to the feet, and if there is discomfort after the bath, it should not be repeated, or used for a shorter period. This is not applicable where there is anæmia, or constitutional disease.

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# DYSMENORRHŒA.

### PROF. T. GAILLARD THOMAS, M. D., OF NEW YORK.

Pursuing the classification of the forms of dysmenorrhœa, given by this authority (see page 52), he recommends the following plan of treatment:

*Neuralgic Dysmenorrhœa.* The skin should be kept warm and active by wearing flannel and bathing. If the rheumatic or gouty diathesis is present, colchicum, guaiac or vapor baths are called for. Chlorosis, plethora, or malaria, if present, should receive attention. A sound should be occasionally introduced into the uterus. Parturition often cures it entirely. Of specific drugs, *apiol* is the most reliable (one capsule night and morn-

ing.) Tincture of *cannabis indica*, gtt. xxv. every fourth hour, will relieve the pain. Where a spasmodic element exists, the following is effectual:

| | | | |
|---|---|---|---|
| 40. ℞. | Extracti belladonnæ, | gr. ¼. | |
| | Butyri cocoæ. | q. s. | M. |

For one vaginal suppository. Repeat every eighth hour.

Enemata of tincture of assafœtida, f. ʒ ij. in a gill of warm water, often produce great relief in this condition.

*Congestive Dysmenorrhœa.* If from chill and exposure, opiates, diaphoretics and sedatives will give speedy relief; if from plethora, bleeding, cathartics and low diet are required; if from a displaced uterus, as is often the case, this must be corrected. Local inflammations must receive attention before a cure can be expected.

*Obstructive Dysmenorrhœa.* Constrictions of the cervix require enlargement, either by dilatation or incision. Sounds, tents, and dilators, are used for the first-mentioned methods. Sea-tangle, sponge, etc., are materials of which tents may be composed. Obstruction from flexion or version of the uterus requires a proper pessary or operation.

*Membranous Dysmenorrhœa.* This is relieved with difficulty. As soon as the menses begin, the patient should go to bed and apply hot-water bottles to the feet, abdomen and sacrum alternately. She should then take an enema:

| | | | |
|---|---|---|---|
| 41. ℞. | Tinct. assafœtidæ, | f. ʒ iij. | |
| | Tinct. belladonnæ, | gtt. xx. | |
| | Tinct. opii, | gtt. x. | |
| | Aquæ tepidæ, | f. ℥ iijss. | M. |

Throw the whole into the rectum and retain. Instead of this, the following may be given by the mouth:

| | | | | |
|---|---|---|---|---|
| 42. ℞. | Chloral hydratis, | | | |
| | Potassii bromidi, | āā | ʒ ij. | |
| | Morphiæ sulphatis, | | gr. iss. | |
| | Syrupi aurantii corticis, | | f. ℥ iij. | M. |

A dessertspoonful in a wine-glassful of water every four hours, while in pain.

*Ovarian Dysmenorrhœa.* The most efficacious remedies are the bromides of potassium and ammonium, in full doses, commenced a week before the menstrual act, and continued until its close. A rectal suppository of gr. v. iodoform gives great relief. Change of air and scene, warm sitz-baths, or warm vaginal injections, and general hygienic measures, are essential.

LAWSON TAIT, F. R. C. S., BIRMINGHAM.

*Ovarian Dysmenorrhœa.* In milder cases, treatment is generally successful. First of all therapeutic remedies is *iron*, whether there are general indications for its employment or not. There can be no doubt but that many forms of this remedy exert a specific power over the sexual organs. It is best given during the intermenstrual period in small doses, liquor ferri perchloridi, gtt. j–v., well diluted, and increased suddenly to gtt. xv–xx., for a day or two previous to and during the menstrual flow; or an iron and aloes pill may be substituted for this large dose. Hot hip-baths and leeches to the perinæum at the period are useful additions, with an occasional blister on the sacrum. *Marriage* is, perhaps, the most efficient remedy, and one we ought seldom to hesitate to recommend.

The last and most powerful aid is *mechanical irritation of the uterus.* The most convenient and least troublesome is the insertion of SIMPSON'S *galvanic pessary.* In a large number of cases this is beneficial; but its use should be confined to those which resist simpler measures. Its introduction may give rise during the first week to considerable discomfort, but this passes off if the patient keeps her bed for a few days. It should be retained for several months. The uterus rapidly enlarges under its action, and the ovaries take part in this increased activity. Mr. TAIT does not share the prejudice against this instrument which some writers have manifested.

### CHARLES R. DRYSDALE, M. D., OF LONDON.

This author maintains (*Obstetrical Journal of Great Britain*, Oct., 1875,) that there is too great a tendency to expect to find an evident physical cause for all painful menstruation. Spasm and neuralgia are quite sufficient to account for the vast majority of cases. Membranous shreds, also, are frequent causes of obstruction to the monthly flow. The rational treatment of dysmenorrhœa commencing at an early period, consists not in the use of pessaries, or of incision of the uterus, but in the use of cold baths in the morning, with short walks in the open air afterwards; in hot baths, a few days previous to the menstrual periods; and in palliative treatment of the paroxysms by means of antispasmodics at the epoch of pain. Marriage sometimes cures such cases at once; at other times, it is of no use.

### PROF. J. MATTHEWS DUNCAN, M. D., OF LONDON.

This teacher strongly advocates the treatment of dysmenorrhœa by mechanical means. He would not hesitate to employ it in virgins when the severity of the case was urgent. The treatment he refers to is that by bougies introduced into the cavity of the womb through the cervix. He states that it is unaccompanied by danger. The only evil result he has ever seen from it is a temporary perimetritis. It is a treatment the innocence of which arises from the fact that there is no cutting, and that the instrument is not left in the womb above a few minutes at a time. It is allowed to remain until the pangs of pain which it brings on have passed. In order to effect a cure you must go up considerably above a No. 9. You must go up so as to stretch and distend the internal os uteri; and this stretching or distension of the internal os may require you, in different cases, to reach different sizes. A No. 11 is quite sufficient in many cases; in others you will go up to a 12 or 13, rarely above that. These various numbers are not all used in one day, but in successive days, or every second or third day;

and generally the whole is effected in a few sittings—say from four to eight. One is not to expect that this treatment will cure every case. By this treatment, he says that most of the characteristic cases are, if not cured, at least greatly ameliorated.

### PROF. F. A. ARAN, OF PARIS.

This well-known gynecologist has highly praised the local application of opium in *neuralgias of the uterine neck*, which sometimes accompany dysmenorrhœa (*Bull. de Thérapeutique*, vol. LXVII.) His method is as follows: Having introduced a speculum, thirty to fifty drops of Sydenham's laudanum are allowed to flow to the bottom of the vagina; sufficient powdered starch is then thrown in to form a magma with the laudanum; upon this is placed a moderately large pledget of cotton, and the whole is left in the vagina, to be renewed daily or every other day, as occasion requires. He reports very great relief by this simple means.

### PROF. J. B. FONNSAGRIVES, OF PARIS.

For therapeutical purposes this writer (*Traité de Thérapeutique Appliquée*, 1878,) divides dysmenorrhœa as follows:

1. *Spasmodic Dysmenorrhœa.* The flow is normal in quantity and regular, but accompanied by sharp pains, and easily interrupted. The indications are, baths and anti-spasmodics, as an enema:

| | | | |
|---|---|---|---|
| 43. ℞. | Powdered valerian, | ʒ iij. | |
| | Laudanum, | gtt. x. | |
| | Warm water, | ℥ viij. | M. |

For a rectal enema.

Or the valerianate of ammonia may be used in a similar manner. Hot poultices to the lower abdomen and sedative lotions to the hypogastric regions are also useful. Of internal remedies, two especially deserve mention, the *acetate of ammonia* and *castoreum*. The former should be given in doses of a fluid drachm

well diluted, several times daily for several days before the period. Castoreum is especially indicated where the pains are associated with distention of the bowels and tympanites, or when the discharge is scanty and *tenesmus uteri* present. Its power is then real and positive. It may be given in pill, powder, or ethereal tincture, in doses of gr. v–xxx. Its failure is often owing to the impurity of the drug.

2. *Dysmenorrhœa from general causes*, as anæmia, plethora, nervous excitement, etc. As here the disturbance of the function is merely symptomatic, it should be so treated.

3. *Dysmenorrhœa through insufficiency.* When the proper amount of blood has not been lost, the woman experiences general discomfort, sense of weight at the hypogastrium, hysterical symptoms, obstinate headache, and local congestions. The indication here is to supplement the menses by a moderate bleeding from the arm (f. ʒ iij.–vj.,) or by leeches.

4. *Menorrhagic dysmenorrhœa* is nearly always associated with the change of life, and will be considered under that section.

5. *Irregular Dysmenorrhœa.* The quantity is normal, but the periods of return are irregular and the function painful. This is generally found either at the beginning or the close of menstrual life, or at the outset of diathetic disease. In other cases, it is proper to solicit the molimen at regular times by emmenagogues.

### DR. EMIL DILLENBERGER, VIENNA.

When there is evident hyperæmia of the womb, several leeches to the portio vaginalis uteri, or to the insides of the thighs, warm soft poultices, or injections of lukewarm water, are very beneficial. When the dysmenorrhœa is of nervous origin, some advantage is derived from the application of warmth, warm baths, mustard poultices, or dry cuppings applied to the loins and thighs, and internally from narcotics, especially opium.

44. ℞. Pulveris opii, gr. j.
Sacchari alibi, ʒj.
Olei menthæ piperitæ, gtt. ij. M.
Divide into six powders. Take one every two to four hours.

Or,

45. ℞. Tincturæ opii, ♏xxx.
Infusi anthemidis, f.ʒ iv.
Aquæ menthæ piperitæ,
Syrupi simplicis, āā f.ʒ ss. M.
One to two tablespoonfuls every one or two hours.

PROF. THEODORE JEWETT, M. D., BOWDOIN MEDICAL COLLEGE.

46. ℞. Camphoræ, ʒ ijss.
Extracti belladonnæ,
Quiniæ sulphatis, āā ʒ ss.
Pulveris acaciæ, q. s. M.
For eighty pills. One to be taken every four hours until relieved.

47. ℞. Extracti scutellariæ fluidi,
Decocti aloës compositi, āā f.ʒ ss. M.
A dessertspoonful every two or three hours until relieved.

Dr. C. W. FRISBIE, of East Springfield, N. Y., writes that he used the above formula in his practice many times, and, when the cases had been properly selected, with the most happy results.

DR. A. DESPRÉS, OF PARIS.

In dysmenorrhœa, warm water occasions congestion of the uterus, and the congestion is followed by a return of the menses, and consequently by a marked alleviation.

Injections of warm water act like the cataplasms and warm lotions, which are so usefully employed in inflammation of the integument.

The injections of warm water are practiced at the hospital with irrigators, of which the jet is not very strong. The water used should be of 95° to 104° Fah., and it is renewed two, four, or six times in a day. This therapeutic means is convenient, and not repugnant to the patient.

### DR. LISFRANC, PARIS.

| | | | |
|---|---|---|---|
| 48. ℞ | Vini opii, | gtt. x–xx. | |
| | Camphoræ, | gr. ij–ivss. | |
| | Decocti althæ | f. ʒ ijss. | |
| | Vitel. ovi, | ʒ ijss. | M. |

For an enema, to be given nearly cold, at bed-time, to relieve the pain of menstruation. Hot fomentations on the abdomen.

| | | | |
|---|---|---|---|
| 49. ℞. | Assafœtidæ, | ʒ j. | |
| | Vini opii, | ♏ xv. | |
| | Extracti valerianæ, | ʒ ss. | |
| | Decocti althæ, | f. ʒ iijss. | |
| | Vitel. ovi, | ʒ v. | M. |

An enæma, in hysterical dysmenorrhœa.

### HENRY HARTSHORNE, M. D., OF PHILADELPHIA.

Whatever be the cause of dysmenorrhœa in any case, the subject of it should always avoid being much on her feet for a day or two before her monthly time; and should go to bed when the pain begins. Cloths wrung out of hot water, or whisky and water, may be placed on the abdomen and renewed as they cool. Internally the following may be given:

| | | | |
|---|---|---|---|
| 50. ℞. | Spiritûs camphoræ, | f. ʒ j. | |
| | Tinct. opii camphoratæ, | f. ʒ ij. | |
| | Tinct. zingiberis, | f. ʒ ss. | |
| | Tinct. lavand. compos., | f. ʒ ss. | |
| | Aquam, | ad f. ʒ ij. | M. |

Take a dessertspoonful every hour or two.

Large vaginal injections of hot water, and dilatation of the os and cervix, are other useful measures. No medicine appears to exert a prophylactic effect, unless it is iron in cases of anæmia.

### PROF. N. S. DAVIS, M. D., OF CHICAGO.

*Rheumatic Dysmenorrhœa.* This practitioner has called attention (*American Practitioner*, October 1877,) to a numerous class of cases of dysmenorrhœa from chronic rheumatic irritation:

First, the patient should wear constantly good warm underclothes of flannel, eat plain, easily-digested food, drink no kind of stimulating drink, and take a full, warm alkaline bath twice a week. On getting out of the bath the water should be wiped off quickly, and the whole surface briskly rubbed with dry flannel, which brings a pleasant feeling of warmth and elasticity.

Secondly, medicines should be prescribed on the same principles as we would for chronic rheumatic irritation in any other structure of the body. Whatever medicines are given, however, must be continued faithfully from two to four months, during the *interval* between each menstrual period.

Treatment during the menstrual week can have no effect beyond palliating the suffering of the patient temporarily. To become curative it must be extended through the interval, for the purpose of so changing the condition of the uterine structure and sensibility as to prevent the recurrence of the pain at the next period.

In the most common class of cases, in which the pain is severe and the flow scanty, Dr. DAVIS has for many years used successfully the following formula:

| | | | |
|---|---|---|---|
| 51. ℞. | Tinct. cimicifugæ, | f.℥ iij. | |
| | Tinct. stramonii, | f.℥ ss. | |
| | Vin. colchici rad., | f.℥ ss. | M. |

Take one drachm at each meal-time, in water.

If, by long continuance or unusual susceptibility, the cimicifuga causes dull headache, as is sometimes the case, either the dose should be lessened, or the fluid extract of *cypripedium* may be substituted in its place. In the same manner, if the colchicum should cause disturbance of the bowels, its quantity must be lessened in proportion to the other constituents.

Another prescription with which he has succeeded in many instances, especially when the pain and soreness extended to the region of the ovaries, is as follows:

52. ℞. Ammoniæ hydrochlor., ʒ iij.
Tinct. stramonii, f. ʒ ss.
Tinct. cimicifugæ rac., f. ʒ iss.
Syr. glycyerhizæ, f. ʒ ij. M.
Teaspoonful three times a day.

Another useful prescription is:

53. ℞. Acidi salicylici, ʒ iij.
Sodii bicarbonatis, ʒ ij.
Tinct. stramonii,
Vini colchici radicis, āā f. ʒ iv.
Glycerinæ f. ʒ j.
Aquæ, f. ʒ iij. M.
Teaspoonful four times a day, in water.

In connection with their medical treatment, Dr. DAVIS instructs his patients to place themselves in the "knee and chest" position for a few minutes three times a day. The hips are high, the knees and chest low, thus throwing the uterus by the force of gravity into its natural position. Any form of pessary only adds to the sufferings of these patients.

### DR. JULIAN S. WOODRUFF, OF SOUTH CAROLINA.

To meet the severe pain which occurs in some of these cases of dysmenorrhœa, this writer states, when *morphine* and *atropine* are combined in solution and injected under the skin for the relief of the suffering, their instantaneous effects are truly wonderful and charming. An injection of this combination subcutaneously has in *three minutes* extinguished all pain, the patient straightening out and laughing and talking.

### DR. HENRY E. WOODBURY, OF WASHINGTON.

The treatment of this practitioner (*Va. Med. Monthly*, Sept., 1878,) is to introduce a very small tent of elm bark into the cervix about a week before the menstrual flow commences. After introducing the tent, a plug of cotton, to which a cord is attached, is passed through the speculum to keep the tent *in situ*. The

plug is then saturated with carbolic acid and olive oil, or glycerine, in the proportion of 1 to 7. By means of the cords attached to the tent and plug, the patient removes them next morning, and uses an enema of water and castile soap. In an obstinate case, a tent is used every day up to the time at which the flow should commence, unless it is established sooner, substituting larger and larger ones as the cervical cavity becomes dilated. As soon as the tent, on removal, is found to be freely stained with blood, its use is suspended until a week before the next period.

The remedies administered internally are concentrated tincture of *helonias*, fluid extract of *ergot*, tincture of *gelsemium*; or syrup of the iodide of iron. The patient commences to take one of these three weeks before the regular date of her flow, and continues it till this is fully established. She then suspends it for a week or ten days, after which she resumes it. Sometimes better results are obtained by using two of the above-mentioned remedies alternately, as the helonias and the iron, or the ergot and iron. A gentle current of electricity is passed through the uterus once a day for two or three days before the period. This treatment has been successfully employed in cases of dysmenorrhœa due to subacute inflammation or displacement, resulting in the constriction or occlusion of the cervix.

### DR. JOHN WILLIAMS, OF ENGLAND.

*Membranous Dysmennorrhœa.*—This writer (*Obstetrical Transactions*, 1877,) is of opinion that the inflammation of the internal surface of the uterus, often found in these cases, is the result, not the cause, of the membranes, but is the result of the membranous dysmenorrhœa. He does not believe they are the results of abortion, as they frequently occur in virgins. The source of mischief must be looked for in the walls of the uterus itself. The membrane is the decidua ordinarily shed as *debris* at menstruation. Dr. WILLIAMS thinks there is something wrong in the uterus from puberty; in fact, imperfect evolution.

As regards treatment, everything should be done to favor the physical development of the young girl. Once the condition is established, the only means whereby a cure is likely to be effected is *electricity*, either in the form of the continuous current, or by a galvanic stem.

### DR. L. DE SINETY, OF PARIS.

This author believes that the so-called *congestive dysmenorrhœa* is merely an exacerbation of chronic metritis at the menstrual period; and that the so-called *nervous dysmenorrhœa* is a neuralgia with a uterine point, becoming more sensitive at the catamenia. In the latter cases, the sensitive point persists in the intermenstrual period, and may be found at the juncture of the uterine neck and body. True dysmenorrhœa is nearly always symptomatic of an affection of the uterus or its annexes, and generally depends on a mechanical obstacle. A small polyp, a blood-clot, or a shred of mucous may cause painful and obstinate dysmenorrhœa.

The treatment, therefore, should be mainly mechanical. Progressive dilatation, by introducing a bougie daily into the cervical cavity and leaving it a quarter of an hour, gives excellent results. If this fails, we must have recourse to general measures, as tonics, hydrotherapy and electricity. Local and general narcotics may be called for to relieve pain. The introduction of chloroform vapor into the vagina is an efficient anodyne. The following rectal injection, administered after having emptied the rectum, and retained as long as practicable, is an efficient calmant:

| | | | |
|---|---|---|---|
| 54. ℞. | Tincturæ opii, | gtt. x. | |
| | Camphoræ pulveris, | gr. xv. | |
| | Vitelli ovi, | j. | |
| | Aquæ frigidæ, | ʒ j. | M. |

For an injection.

In *membranous dysmenorrhœa* the local treatment is essentially the same. The indications for general treatment must be based on the diathesis. Thus, iodide of potash or cod-liver oil, useful

in some cases, must in others be replaced by arsenic or the alkalies. *Electricity* has given excellent results in some cases of this nature after every other resource has been exhausted. When there is decided endometritis, cauterization of the internal surface of the uterus, preferably with the silver nitrate, is valuable; but where the pathological process consists in simple hypertrophy or an exaggerated desquamation of the normal mucous coat, such a proceeding would be useless, if not injurious. Hence, a careful microscopic study of the expelled product should precede any such operation.

## RÉSUMÉ OF REMEDIES.

**Ammoniæ Acetatis Liquor.* In painful menstruation, f. ʒj. doses of this preparation of ammonia, given every hour when the pains come on, will often be found to lessen or wholly dissipate them. BARNES recommends:

55. ℞. Spiritus ætheris comp., f. ʒ ss.
Liq. ammo. acetat., gtt. xv. M.
For one dose several times daily.

*Ammoniæ Murias.* The following is highly recommended by Dr. O. WARD, of Tennessee, in the painful dysmenorrhœa of the climacteric period.

56. ℞. Ammoniæ muriatis, ʒ ij.
Extracti glycyrrhizæ, ʒ ss.
Aquæ, f. ʒ vj. M.
A dessertspoonful three times a day.

*Amyl Nitrite* has been found of great benefit in spasmodic dysmenorrhœa by Dr. MARY PUTNAM JACOBI, especially when supported by belladonna, commenced previous to the beginning of menstruation. (*New York Medical Record*, Jan. 2d, 1875.) Or it may be given in one-drop doses in peppermint water every half hour. (SELL.)

*Apiol*, in the hands of Dr. TILT, of London, acts like a charm when given in doses of four grains, so soon as the pains of dysmenorrhœa begin. It is of little use, however, when the dysmenorrhœa depends upon dis-

ease of the uterus. It is also of decided efficiency in *fetid menstruation.*

***Arseniosum acidum***, in dysmenorrhœa associated with anæmia, is often advantageous, as:

57. ℞. Tincturæ ferri chlor. ℥ x.
Liquor. potassæ arsenitis, ℥ ij. M.
SIG.—Twelve drops after each meal, through a glass tube, in about one-third glass of water.

****Belladonna.*** In neuralgic dysmennorrhœa, Dr. ANSTIE, of London, recommends (*British Medical Journal*, August 22d, 1868,) the extract, as a palliative, in doses of gr. $\frac{1}{6}$. He obtained still better results from the hypodermic injection of the sulphate of atropia, in doses of gr. $^1/_{120}$–$^1/_{60}$, twice a day, and continued for several weeks, at once reducing the quantity when marked dryness of the throat appeared. In constitutions very intolerent of belladonna in any form, the acetate of morphia may be advantageously substituted for the atropia. A belladonna plaster to the sacrum is often of benefit; so also is a suppository of extract of belladonna.

***Brominium*** acts efficiently, according to BARNES, in ovarian dysmenorrhœa.

***Camphor.*** Dr. DEWEES regards camphor as a very certain and uniform palliative, in doses of gr. x. every one or two hours, until relief be obtained. Or the following injection may be given:

58. ℞. Camphoræ, ℥ ss.–j.
Tincturæ opii, f. ℥ j.
Mucilaginis. q. s. M.
For an enema.

Camphor liniment, or ointment, well rubbed into the loins, also affords relief.

***Cannabis Indica*** is sometimes a useful remedy.

***Cimicifuga.*** The eclectic practitioners speak of this as a most efficient remedy in dysmenorrhœa, and temporary suppression from cold, or where there is a rheumatic diathesis. PHILLIPS endorses this statement from his own experience. (*Mat. Med.*, 1879.) (F. 51.)

***Colchicum*** is useful in dysmenorrhœa connected with a tendency

to gout or rheumatism. It should be given with blue pill every other night; flannel at the same time should be worn, and exposure to cold avoided. (F. 53.)

*Cocculus Indicus.* In thin and nervous females, where the discharge is scanty, and preceded by paroxysmal griping pains, Dr. C. D. PHILLIPS (*Mat. Med. and Ther.*, 1879,) states that the administration of cocculus, commenced a few days before the period, will frequently ward off the pains and render the discharge natural. The dose is ♏ij.–x. of a tincture 1–8.

*Codeia,* gr. ¼, highly commended by ARAN, often agrees where opiates do not.

*Crocus Sativus.* The saffron is much employed by French practitioners in dysmenorrhœa, both as infusion and tincture, and also locally. The following "cataplasme antispasmodique" is highly recommended in painful cases:

9. ℞. Croci contusi, ʒ iij.
Pulv. camphoræ,
Opii pulveris, āā ʒ j.
Lini, ʒ viij.
Aquæ ferv., q. s. M.

Mix the saffron and opium with a little water, and then stir this and the camphor into the poultice and lay it warm upon the painful uterus. It is especially grateful in "uterine colic," or "uterin rheumatism."

**Ergota* is often of excellent service, especially in the *congestive* form; 3 ss. of the fluid extract every half hour may be given.

**Ferri Chloridi Tinctura* and *Ferri Vinum* are both excellent preparations in ovarian atonic dysmenorrhœa. Sir CHARLES LOCOCK recommends the following formula:

60. ℞. Vini ferri,
Spiritus ætheris sulphurici compositi, āā f. ʒ j.
Mixturæ camphoræ. f. ʒ vj. M.

Take one-fourth part every six hours.

*Gossypium.* Dr. L ALEXANDER, of Pennsylvania, has found much benefit in the following:

61. ℞. Extracti gossypii fluidi, f. ʒ ij.
Extracti ergotæ fluidi,
Tinct. hellebori nigri, āā f. ʒ j. M.

Teaspoonful every three hours, commencing two or three days before the expected attack.

**Guaiacum* is often productive of the greatest benefit. The *tinctura guaiaici ammoniata* is especially servicable. In ovarian and rheumatic forms, it deserves to be called a specific. In chronic cases, it should be accompanied by the iodide of potassium.

*Oleum Terebinthinæ*, in does of gtt. xx., thrice daily, with warm baths, is recommended in membranous dysmenorrhœa by TROUSSEAU.

**Opium.* Opiates are often best exhibited in the form of enemata. Dr. E. J. TILT, of London, recommends a hot linseed-meal poultice, sprinkled with laudanum, to be applied to the hypogastrium. A single hypodermic injection of morphia, when the pain is habitually severe, will often be sufficient at each menstrual period.

**Potassii Bromidum.* This sedative is especially valuable in neuralgic, ovarian and membranous dysmenorrhœa. It should be given in large doses, prior to the commencement of the period.

*Potassii Nitras* has been found highly serviceable, in doses of gr. xv.–xx., well diluted with barley water.

*Pulsatilla*, in tincture or extract, has been well spoken of, especially in the ovarian forms. Dose, gtt. iii.–x. of the fresh tincture.

*Sinapis.* Dr. ASHWELL recommends the mustard hip-bath, to be repeated three or four times a day, the patient remaining in it for from thirty to sixty minutes, or even, if the pain be very severe, until faintness is induced.

*Sodii Biboras* is of advantage combined with extract of belladonna.

*Stramonium* is said to be of marked benefit in the severe form of the disease.

*Taraxacum.* A half-teaspoonful of the extract in a little warm milk every night proves useful, by keeping up a healthy action of the liver and skin.

*Veratria.* Mild veratria ointment, rubbed over the hypogastric region twice a day, greatly relieves the pain.

*Viburnum Prunifolium* affords often great relief if taken for a few days before the menses appear. Dr. E. W. JENKS

(*Trans. of the Amer. Gyn. Soc.*, 1876,) states that in all forms of dysmenorrhœa attended with profuse menstruation, it is of much value, but where the flow is scanty, it does not prove beneficial. It is not sufficiently sedative, if given alone, freely, to relieve the sufferings of spasmodic or neuralgic dysmenorrhœa; but it is a valuable adjunct to sedative and antispasmodic remedies. The dose is f. 3ss.–j. of the fluid extract, three or four times a day.

## MECHANICAL REMEDIES.

*Galvanism.* Dr. Wm. B. Neftel (*New York Medical Record*, Oct. 6th, 1877,) gives notes of the cure of two cases of aggravated dysmenorrhœa of long standing, which had been treated thoroughly but unsuccessfully, by some leading gynecologists, but which readily yielded to treatment by the galvanic current. He believes that dysmenorrhœa is essentially of nervous origin (a visceral neuralgia), though it is frequently accompanied by structural or mechanical derangements of the womb; and that these derangements are frequently the consequences of the nervous affection rather than the cause thereof.

*Rapid Dilatation* of the canal of the neck of the uterus in painful menstruation resulting from a narrow and restricted condition of the uterine canal, has been very successfully applied by Dr. Ellwood Wilson, of Philadelphia, (*American Gynecological Transactions*, 1877.) This he accomplishes by means of an instrument designed for the purpose.

# MENORRHAGIA AND METRORRHAGIA.

## PROF. ROBERT BARNES, OF LONDON,

Says in all cases of hemorrhage from the uterus, obtain and maintain a patulous condition of the cervical canal. This, of itself, often arrests the bleeding. Remove everything in the shape of a foreign body, as clots, retained ova, membranes, or placenta. To do this, one or two fingers may be passed in to break them up. Hæmostatics may be introduced by means of a swab of cotton wool, twisted on a roughened probe; or where, by reason of the narrowness of the canal, this is impracticable, injections or solid styptics may be used. The best way is by inserting small bits of sponge in a tube made like the uterine ointment positor, and saturating this with the styptic. The tube is then passed into the uterus, and pressure of the piston squeezes out the fluid, drop by drop, upon the bleeding surface. This failing, the styptic must be injected boldly.

In *passive hemorrhage*, the general vascular tension, the increased action of the heart, and the determination of blood to the pelvic organs, must be moderated. The most useful agents here are digitalis, aconite, bromide of ammonium or potassium, sometimes opium, ipecacuanha, chloral, salines, as acetate of ammonia, nitrate of potassa. Cold is often useful. Ice in the vagina or cold water injections should always be tried early.

Position is important; keep the pelvis above the level of the body.

Saline purgatives especially operate with advantage. Internally, the most useful are turpentine in capsules, ergot in fluid extract or powder, or ergotine, tincture of hamamelis in five or ten-drop doses every three or four hours, quinia, strychniæ, sulphuric or phosphoric acid, tannic or gallic acid, acetate of lead, the vinca major, Indian hemp, ipecacuanha. All failing, styptics locally must be used. The after-treatment does not at first require iron; this only adds fuel to the fire; the system requires,

first, salines, these serve better to replenish the exhausted circulating fluid. They subdue vascular excitement, allay fever, calm nervous irritability, improve the secretions, and prepare the way for iron and other tonics. The best form of saline is the freshly prepared acetate of ammonia; to this may be added a sedative, as Battley's solution, and sometimes digitalis or aconite. Later, hamamelis, ergot, quinine, mineral acids, and a decoction of bark, and later still, iron. The best forms are the citrate, acetate or chloroxide in an effervescent form, or the dialyzed iron, at first in small doses to feel the way. Sleep is of signal service, opium with the saline, or as the compound opium pill in five-grain doses, or as pulv. ipecac. comp., ten grains. If not well borne, we have a precious resource in chloral, in scruple doses.

### PROF. T. GAILLARD THOMAS, NEW YORK.

This author says that in cases of menorrhagia the patient should be kept perfectly quiet upon her back; cloths wrung out of cold water should be laid over the uterus, vulva and thighs; cold acidulated drinks should be given freely; and the injection of all warm fluids strictly interdicted. In addition, the apartment should be kept cool, the nervous system quieted by opium or an appropriate substitute, and all conversation prohibited. In mild cases this may suffice, but in severe ones it will not. Then the speculum should be introduced, a sponge-tent passed into the cervix, and the vagina filled with a tampon. This will rarely fail. But in certain cases, as, for instance, those of cancer of the neck, the tent will not be admissible. Under these circumstances, a soft sponge or wad of cotton should be saturated with a solution of persulphate of iron, laid upon the cervix, and the tampon placed against it; or a small linen bag may be filled with powdered alum, placed in contact with the cervix, and held in place by a tampon; or two drachms of tannin may be left free against the part. To these means almost all cases will temporarily yield, more especially if the use of the tent is admi sible.

Where the menorrhagia is due to a fungus degeneration of the

intra-uterine membrane, the *curette* is a most valuable resource; or the lining membrane of the uterus may be modified by energetic agents, as nitric acid, tincture of iodine, nitrate of silver, etc.

In very obstinate cases, change of climate will often prove of decided benefit.

### PROF. ROBERTS BARTHOLOW, M. D., PHILADELPHIA.

When menorrhagia is the result of impoverished state of the blood, iron is the most appropriate medicament. It may be combined with arsenic.

Gallic acid is very effective, as in the following formula:

| | | | |
|---|---|---|---|
| 62. ℞. | Acidi gallici, | ʒss. | |
| | Acid. sulphur. dil., | f.ʒj. | |
| | Tinct. opii deod., | f.ʒj. | |
| | Infus. rosæ comp., | f.ʒiv. | M. |

A tablespoonful every four hours, or oftener.

When there is a large spongy uterus, ergot is indicated. When caused by ovarian excitement, bromide of potassium will promptly relieve.

Ipecacuanha possesses very valuable anti-hemorrhagic powers; it should be frequently repeated.

| | | | |
|---|---|---|---|
| 63. ℞. | Ext. ipecac. fluidi, | f.ʒij. | |
| | Ext. ergotæ fluidi, | f.ʒiv. | |
| | Ext. digitalis fluidi, | f.ʒij. | M. |

Thirty minims to a teaspoonful at a dose, as required.

In debilitated and relaxed subjects, menorrhagia may be relieved by determining an afflux of blood to the uterine system. Iron and aloes may be here associated. But the latter would be contra-indicated where there already existed congestion of the pelvic viscera.

### EDWARD JOHN TILT, M. D., LONDON.

This writer lays much stress on the importance, in severe cases, of placing the head on a level with the body. Sedatives

are always beneficial. The bromide of potassium or of ammonium has been known to check the tendency to menorrhagia.

In many cases damaging blood loss may be checked by the exhibition of full doses of the liquid extract of ergot and the tincture of digitalis, f. 3 ss. three times a day, as:

64. ℞. Tincturæ digitalis,
Extracti ergotæ fluidi, āā f. ℥ iij.
Aquæ destillatæ, ad f. ℥ vi. M.

The sixth part to be taken three times a day for three days.

While giving these remedies, a two grain-opium suppository should be passed into the rectum once a day, even if there be no pelvic pain, for opium has often helped to quell blood-flow. In any case, it is well to commence with small doses of ergot and digitalis a few days before the menstrual period is due.

### PROF. GRAILY HEWITT, M. D., LONDON.

The treatment must of course in all cases have reference to the exciting cause of the profuse flow. Flexion or congestion of the uterus is frequently present. It must receive attention.

The external employment of *baths* is of the greatest service, especially cold hip-baths and sponge-baths. Cold to the spine, by means of ice-bags, has proved of service. Injections of cold or iced water into the rectum is a valuable means of arresting the flow of blood in bad cases.

Dr. HEWITT believes that styptics taken internally are frequently found very serviceable; of them, he considers the most efficient to be *matico* in combination with tincture of iron, or the latter alone in large doses, ♏xxx.–xl. Opium has been highly extolled, but does not appear to be adapted to chronic cases.

Where the discharge is exhausting, stimulants and nourishment should be freely administered in small quantities at frequent intervals.

### PROF. WILLIAM H. BYFORD, M. D., OF CHICAGO.

This practitioner, in the *Transactions of the International Medical Congress*, 1876, discusses in considerable detail the treatment of metrorrhagia.

In the palliative treatment, isolation, quietude, and recumbency, are very important cautions to be enjoined. Plain food, cool clothing, and general hygienic rules, are indispensable. In regard to drugs, Dr. B. has derived considerable advantage from astringents proper. The most generally applicable agent is *ergot;* but it will usually fail when the flow is venous, as in retroversion, pelvic infarction, tumors, etc. When there is much pain in the pelvis, and a dry state of the skin, opium and ipecacuanha are very serviceable. When vascular and nervous excitement is prominent, lobelia, gelsemium, digitalis, aconite, and veratrum viride, are all of use.

These measures failing, we must resort to either mechanical or chemical means. The former is represented by the tampon; the latter by powerful hemostatics. They may be all advantageously combined, as in the plan proposed by Dr. MARION SIMS. His hemostatic is:

| | | | |
|---|---|---|---|
| 65. ℞. | Liquoris ferri subsulphatis, | f. ℥ ss. | |
| | Aquæ, | f. ℥ j. | M. |

The finest cotton wool is saturated with this, and then submitted to moderate pressure and dried for use. Its application is made by wrapping a sufficient quantity around a long, small piece of whalebone, and introducing it into the cavity of the uterus, when the cotton is detached and left there. If the hemorrhage is moderate, one such piece will suffice; if severe, it will be necessary to stuff the uterine cavity full. Strong thread can be attached to the cotton to withdraw it when necessary. From twelve to twenty-four hours is as long as it should remain.

In the intermenstrual period, curative measures should be resorted to, as alteratives, tonics and derivatives. *Muriate of*

*ammonia* will be found especially valuable. When debility is present, among the very best remedies is:

66. ℞. Hydrargyri chloridi corrosivi, gr. $\frac{1}{16}$–$\frac{1}{12}$.
Tinct. cinchonæ compositæ, f. ʒj. M.

This amount thrice daily.

Iodine, iodide of potassium, and iodide of iron, are also efficient. A beneficial derivative measure is dry cups over the sacrum often repeated. The cups should be large, and allowed to remain for an hour or more.

### M. PANAS, M. D., OF PARIS.

Among the various manipulative measures used in severe metrorrhagia, preference is given by this writer to plugging the cavity of the neck of the womb, which has several advantages over plugging the vagina in such cases. It stops the blood more effectually, the patients bear it better, and there is less chance of putrid absorption. The plan adopted by M. PANAS consists of introducing into the cavity of the uterine neck a pledget of cotton wool, rolled up to about the thickness of a goose-quill, and steeped in a solution of the perchloride of iron of the French *Codex*, to which is added one part of water, to prevent its caustic effects.

This being done, he introduces a ball of cotton wool and places it in the posterior *cul-de-sac* of the vagina, where it not only forms a support to the uterine plug, but it absorbs any liquid that may escape through it, and thus protects part of the vagina (which is covered with the peritoneum) from the corroding effects of the perchloride of iron and the acrid discharges from the womb.

### DR. RUDOLF TAUSZKY, OF NEW YORK.

The treatment adopted by this physician is thus briefly set forth in the *Amer. Jour. of the Med. Sciences*, January, 1881:

In the treatment of menorrhagia, metrorrhagia, or chronic

pelvic congestions and hyperæmic conditions, *rest*, with pelvis elevated, is of the highest importance. Hot water injections and scarifications of the cervix and endometrium he has found beneficial. *Salicylate of soda*, *quinia*, *digitalis* in large doses, and *opium*—for the relief of pain and where a nerve sedative is indicated—are invaluable means of arresting uterine hemorrhages. *Ergotin* in large doses, given before, during, and after menstruation, every hour until the hemorrhage, if profuse, ceases, is one of our most valuable aids in arresting it. The use of intra-vaginal balls of the astringents, alum, tannin, and tincture of iron, preferably four grains of alum with a few drops of iron and glycerine, introduced every hour if the hemorrhage is alarming, or still better, the careful intra-uterine application down to the fundus of tannin and glycerine upon a probe, or of Monsell's solution of the subsulphate of iron, half diluted with water, have checked uterine hemorrhages that have resisted treatment for months. He has never seen any ill-effects follow the intra-uterine application of iron in a large number of obstinate metrorrhagias in his own practice. Cauterizations in catarrhal endometritis, five or six days after the menstruation has ceased, repeated once a week, often cures the catarrh.

### DR. EMIL DILLENBERGER, VIENNA.

The treatment of menorrhagia according to the Vienna school comprises rest, horizontal position with the pelvis elevated, low diet, and cooling drinks, such as:

| | | |
|---|---|---|
| 67. ℞. | Acidi tartarici, | gr. x.–xxij. |
| | Syrupi aurantii florum, | f.℥ vj. |
| | Aquæ, | f.℥ xv. M. |

For drinking.

| | | |
|---|---|---|
| 68. ℞. | Tamarindi, | ℥ j. |
| | Fiat decoctum libræ unius, | |
| | Acidi sulphurici aromatici, | f.℥ j.–ij.) |
| | Syrupi rubri, | f.℥ ss.–j. M. |

For drinking.

69. ℞. Acidi sulphurici aromatici, f.℥ ij.
Syrupi rubri, f.℥ j. M.
One to two teaspoonfuls in a glass of water as a drink.

These directions and prescriptions, together with pure air, only moderately warmed, in the room, are some of the most important points which alone will often restrain rather free bleeding.

When there is *passive hemorrhage*, use cold dressings, injections of cold water, or the following astringents:

70. ℞. Aluminis, ℥ ij.–ivss.
Aquæ, f.℥ iv. M.
For vaginal injections.

71. ℞. Acidi tannici, ℥ ss.–iv.
Aquæ, f.℥ xv. M.
For vaginal injections.

72. ℞. Zinci sulphatis, gr. x.–xxxiv.
Aquæ, Oj. M.
For vaginal injections,

73. ℞. Catechu, ℥ ij.
Aquæ, f.℥ xv. M.
For vaginal injections.

74. ℞. Extracti krameriæ, ℥ ij.
Aquæ, f.℥ xv. M.
For vaginal injections.

Plugging the vagina is also an effectual remedy.

Among internal remedies, those that have generally shown themselves the best are:

75. ℞. Ferri chloridi, gr. xvj.
Tincturæ opii, gtt. x.
Syrupi tolutani, f.℥ ij.
Aquæ, f.℥ vj. M.
A tablespoonful every one or two hours.

76. ℞. Pulveris ergotæ,
Sacchari albi, āā gr. xxxiv.
Olei cinnamomi, gtt. j. M.
Divide into six doses. One powder every five minutes.

77. ℞. Extracti ergotæ fluidi, ♏xx.–xl.
Syrupi acaciæ, f.℥ ij.
Syrupi aurantii florum, f.℥ ss.
Aquæ, f.℥ iij. M.
One tablespoonful four times a day.

78. ℞. Extracti krameriæ, gr. vj.–xx.
Aluminis,
Sacchari albi, āā gr. xxij.
Olei cinnamomi, gtt. j. M.
Divide into six powders. One powder every two or five hours.

79. ℞. Aluminis, gr. xxxij.
Tincturæ cinnamomi, f.℥ ij.
Syrupi aurantii corticis, f.℥ ss.
Aquæ cinnamomi, f.℥ iv. M.
One tablespoonful hourly.

## RÉSUMÉ OF REMEDIES.

***Achillea Millefolium***, the yarrow, has beneficial properties where the excessive flow depends on atony of the organs.

***Acida.*** The mineral acids internally have been familiar to the profession for many years as remedies for excessive flowing, but their efficacy has been doubted of late years. (See F. 68, 69.)

***Alumen*** often proves successful in controlling the hemorrhage. Dr. E. J. TILT, of London, says that in uterine hemorrhage, alum, in solution with sulphuric acid, is the first remedy to try.

***Ammonii Bromidum.*** In case of *too frequent menstruation*, not specially connected with menorrhagia, but rather with abnormal activity of the genital system, Dr. J. R. BLACK, of Ohio, has found decided benefit from this drug, gr. x. four times daily, beginning at least a week before the expected molimen. (*Half-Yearly Compendium*, July, 1879.)

***Argenti Oxidum*** is an efficient remedy in menorrhagia. More than three grains daily should not be given.

***Arseniosum Acidum.*** Fowler's solution is said to check uterine hemorrhage, given at first in the dose of ♏x.–xx., and repeated in ten-minim doses every twenty minutes until the discharge ceases. This remedy must not, of course, be pushed too far. In the *Practitioner*, February, 1880,

Dr. G. S. A. RANKING testifies to the great value of ten-drop doses of Fowler's solution in uterine hemorrhage, given twice a day, either alone or in combination with a mineral acid.

*Berberiæ Sulphas.* Dr. R. H. ANDREWS, of Pennsylvania, (*Trans. of the Pa. State Med. Soc.*, 1877,) reports very satisfactory results with this drug in cases of profuse exhausting menstruation. He prescribed the remedy as follows:

℞. Berberiæ sulphatis, ℈j.
Sacchar. albi, ʒiss. M.
Make 12 powders.

One of these powders is directed to be taken when the flow is very free, or if not free in three or four days after the menses have appeared; repeated in four or eight hours, according to indications. The effects of such an administration of the remedy are a cessation of the profuse flow, diminution in the length of the period, and in a measure curative of the disease.

*Borax* is employed by some practitioners. (See under *Ergota.*)

*Caffea.* In uterine hemorrhage Dr. DESPRÉS uses strong coffee, of which he makes his patients take four or five cups daily. He attributes to it properties analogous to those of ergot, and employs it under the same conditions.

**Cannabis Indica.* Dr. CHURCHILL, of Dublin, obtains from the tincture of Indian hemp, in doses of gtt. v.–x., thrice daily, remarkable success in the treatment of menorrhagia and uterine hemorrhage. Dr. THOMAS, of New York, pronounces it one of the best agents in this disease at our command.

*Catechu* may be used in passive hemorrhage. (F. 73.)

*Cimicifuga.* Dr. RINGER, of London, says this remedy will certainly arrest menorrhagia, though he regards it as inferior in this affection to the bromide of potassium.

*Cinnamomum* is a grateful stomachic, and nearly always of value in uterine hemorrhages. It may be given as tincture or in the powder, ℈j. at a dose.

*Digitalis* is useful in menorrhagia and other forms of uterine hemorrhage, unconnected with organic disease. Dr. E. J. TILT, of London, employs the following:

81. ℞. Tincturæ digitalis, ƒ ʒij.
Acidi hydrocyanici diluti, ♏xxx.
Morphiæ acetatis, gr. j.
Aquam, ad ƒ.ʒvj. M.
A dessertspoonful every two or three hours.

Dr. W. H. Dickinson recommended the infusion ℥ j.–iss.

**Ergota*, though not equally beneficial in all cases, is a useful remedy in menorrhagia. Dr. Waring-Curran states (*Medical Press*, Nov. 17th, 1869,) that it proves most useful in that form of menorrhagia which occurs in women of a scrofulous habit, who suffer from constipated debility, and in whom leucorrhœa exists as a consequence of previous hemorrhage. He gives freshly prepared infusion of ergot and borax in menorrhagia from obstructive cardiac disease, in that associated with a diseased portal system, in that consequent upon a scorbutic state of the system, and in genuine menorrhagia (*i. e.*, an increase of the catamenia, continuing for a lengthened period, and returning before the proper period, without organic lesion.) He finds it has little or no effect in menorrhagia dependent upon ulceration of the os, the presence of polypous growths or other tumors, or in that arising from retroflection of the uterus. Ergotin, subcutaneously, should not be neglected. Athill prescribes it in the form of infusion, and if symptoms of ovarian irritation exist adds bromide of potassium in full doses. If anæmic, ten drops of tincture of iron with three to five drops of solution of strychnia to each dose of ergot. The strychnia increases in a marked degree the action of the ergot.

*Ferrum.* The preparations of iron should be given when there is defective assimilation and nutrition, but must not be exhibited in a routine manner. There are cases of menorrhagia associated with pallor and debility, where the usual compound of iron and extract of ergot is not so useful as a non-chalybeate treatment. In these cases it is not any imperfection in the process of blood manufacture which is to be remedied, for the blood is made rapidly and quickly, only to be lost at each menstrual period. It is here desirable rather to limit the rapidity of the blood formation, so that when the

severe vascular turgescence of the menstrual period comes, it will not find the blood-vessels too distended with blood. This will lead to diminished catamenial loss, and so the blood-waste will be economized.

**Gallicum Acidum* was much employed by the late Sir. J. Y. SIMPSON, of Edinburgh, in atonic menorrhagia. He gave it in doses of gr. x., xv. or xx. daily, and continued its use during the intervals, as well as the period of discharge. Dr. E. J. TILT, of London, while testifying to its value as an astringent in many cases, finds that it often fails when the hemorrhage depends upon organic lesions. Dr. WILLIAM GOODELL gives it in doses of gr. xx.–xxx. every two hours, in syrup or molasses. Dr. T. H. TANNER prescribes:

82. ℞. Acidi gallici, gr. xv.–xxv.
Acidi sulphurici aromatici, ♏xv.–xx.
Tincturæ cinnamomi, f.℥ij.
Aquam destillatam, q. s. ad f.℥ss. M.

For one dose. Mix with two or three tablespoonfuls of water, and take every few hours, in profuse menorrhagia, until the bleeding ceases.

Dr. ATTHILL gives it with ergot, ten grains of each.

*Hamamelis* has been recommended, in doses of a few drops of the fluid extract. Its virtues are questionable.

**Ipecacuanha*, in full emetic doses, is often productive of the best results. Under the use of gr. xx. of the powdered root, in the evening, followed by an acidulated draught in the morning, the discharge frequently ceases in twenty-four hours; if a relapse occurs, a repetition of the emetic seldom fails to make the cure permanent. Dr. TYLER SMITH thus explains its action in these cases: by its emetic power, it excites contraction of the abdominal muscles and compression of the uterus, which may, in turn, re-excite some amount of uterine reflex action; but beyond this, it appears to have a special action upon the uterus, increasing its contractile power beyond what could be imagined to occur from the merely secondary effects of vomiting. Ipecacuanha thus appears to influence the medulla oblongata and the lower medulla spinalis. This double action

upon the extremeties of the spinal centre is very extraordinary.

***Krameria*** is particularly useful in menorrhagia occurring about the usual time of the cessation of the menses. Dr. DEWEES employed the following formula:

83. ℞. Extracti krameriæ, ʒ ij.
Pulveris rhei, ʒ ss.
Syrupi, q. s. M.
Divide into forty pills, and order two thrice daily.

***Magnesiæ Sulphas*** is recommended by Dr. GRAILY HEWITT, of London, who found a mixture containing very small doses of this salt, with a little dilute sulphuric acid and syrup, very useful during the time of the catamenial flow.

***Matico.*** The pounded leaves, made into a paste and introduced into the vagina, are said to arrest the hemorrhage, after the failure of a strong solution of nitrate of silver.

***Plumbi Acetas*** often succeeds in severe cases, when given in enema

84. ℞. Plumbi acetatis, gr. xv.–xx.
Tincturæ opii, ♏xl.
Mucilaginis, f.ʒ ij. M.
For enema.

In mild cases, the internal administration of sugar of lead and opium is usually successful. Dr. WORKMAN, of Canada, gives it in doses of gr. xxx., repeatedly.

****Potassii Bromidum*** is a favorite remedy of Dr. RINGER, of London, who lays down the following rules for its administration in menorrhagia: If the loss of blood occurs only at the natural menstrual period, it will be sufficient to begin the medicine about a week before the discharge is expected; and when this has for a time ceased, it should be discontinued till the next attack is about to begin. If, on the other hand, the loss of blood occurs every fortnight, or oftener, it should be given without any intermission, till the

disease is well controlled; and when the discharge has been brought to its right period and amount, a few doses should be given for a short time before each monthly period. It has less control over uterine hemorrhage due to tumors of the uterus than ergot and other remedies. In *ovarian menorrhagia*, indicated by tenderness of the ovaries, Dr. ALFRED MEADOWS has found no drug which possesses so great power as the bromide:

85. ℞. Potassii bromidi, gr. xxx.
Syrupi ferri bromidi, ℥j. M.
This amount in water thrice daily. Locally a pessary containing conia, gr. j., atropia, gr. $\frac{1}{12}$, in the vagina every night. (*British Medical Journal*, July 12th, 1879.)

*Potassii Chloras.* This is a very valuable agent in all forms of the hemorrhagic diathesis, as is ably shown by Dr. ALEXANDER HARKIN. (*Brit. Med. Jour.*, October 30th, 1880.) He uses in menorrhagia from this cause:

86. ℞. Potassii chloratis, ℥i.
Aquæ, ℥xx. M.
One ounce three times a day.

Often some tincture of the chloride of iron may advantageously be added to this.

*Quiniæ Sulphas.* In malarious districts, full doses of quinia are often the only remedial means efficient or required in this form of hemorrhage. Dr. BARNES always uses it in hemorrhage from sub-involution.

*Savina.* PHILLIPS has derived great benefit from gtt. v.–x. of the tincture, in a tablespoonful of cold water every half hour, in menorrhagia. ARAN considers it one of the most valuable agents in hemorrhage from an atonic condition of the uterus.

*Sclerotinicum Acidum.* This derivative of ergot has been employed by Dr. STUMPF. (*Deutches Archiv für Klinische Medicin*, Oct., 1879.) The dose employed varied from two to sixty centigrammes; no symptom of poisoning was observed. The results obtained in the treatment of hemorrhages were such as to show that

sclerotinic acid may fairly be ranked as equal in therapeutic value to the other preparations of the ergot of rye; bearing in mind the rapidity of its action, and its relative harmlessness when used hypodermically, it may be regarded as superior to ergotine. In three cases of profuse menorrhagia, 8 to 20 centigrammes sufficed to arrest the discharge. Metrorrhagia, especially that due to chronic metritis, was more obstinate, though in some instances a rapid cure was effected; 3 to 4 injections were generally required, and in one case eighteen.

*Sodii Salicylas.* Dr. A. SCHOTT, (*Volkmann's Klinische Beiträge*, No. 161,) says of this substance: "The best results are obtained in cases of menorrhagia and congestions of the pelvic organs by salicylate of soda. It acts as an anti-pyretic and anti-hemorrhagic remedy. It is highly beneficial, especially where there is congestion, swelling, pain, and slight elevation of temperature. Where it causes slight nausea, it can be given per rectum, by means of a long rectal tube. An elastic catheter (male) and a glass syringe are sufficient for the purpose, and the patients can use it themselves. From fifteen to thirty grains of the remedy are administered for this purpose every hour, until the bleeding stops; if it returns, renew the dose. In obstinate cases large doses ought to be used. It causes ringing in the ears and temporary deafness. Only in affections of the heart is its use contra-indicated. By this treatment menstruations that lasted twelve to thirteen days, with great pain, ceased on the second day. My experience with this remedy extends over a period of several years."

*Sulphuricum Acidum Dilutum* is a favorite remedy with some.

**Tannicum Acidum*, alone or combined with a small portion of dilute nitric acid, has often the happiest effects. Dr. ROBERT BURNS, of Philadelphia, employs:

87. ℞. Acidi tannici,
Zinci sulphatis, aā ʒj.
Glycerinæ, f.ʒj. M.

Wet cotton with this, and apply to the interior of the uterus.

*Trebinthinæ Oleum.* A prescription recommended by Dr. E. J. TILT, is:

88. ℞. Olei terebinthinæ, ℥ ss.
Tincturæ capsici, ℥ ss.
Tincturæ ergotæ, ℥ j.
Tincturæ lavandulæ compositæ, ℥ ij. M.

In cases of uterine hemorrhage, give from half a drachm to a drachm of this mixture in milk, after shaking the bottle. In severe flooding after parturition, from half an ounce to an ounce may be given in plenty of milk, with good results.

*Urtica.* The nettle in infusion is a popular remedy.

*Viburnum Prunifolium* is peculiarly applicable in menorrhagia depending wholly upon systemtic causes, as phthisis, diseases of the heart or liver, malaria, etc. It is also beneficial in that occurring at the menopause.

*Viscum Album.* The mistletoe has been recently commended in menorrhagia by some observers.

*Zinci Oxidum* is highly spoken of by Prof. A. R. SIMPSON, of Edinburgh, in doses of gr. ij. thrice daily.

*Zinci Sulphas*, in doses of gr. j.–ij. in pills, thrice daily, is often useful in the atonic forms of menorrhagia.

## VAGINAL INJECTIONS.

*Alumen.* Dr. E. J. TILT, of London, orders, in purely atonic cases of menorrhagia, the following vaginal injection:

89. ℞. Aluminis, ℥ j.
Decocti quercus albæ, ♁ j. M.

This injection is inadmissible if inflammatory symptoms be present.

*Ferri Chloridi Tinctura*, with equal parts of water, has been injected with success.

*Galla.* Decoction of galls (℥ j ¼, aquæ ♁ j.), daily injected into the vagina, warm or cold, according to the feelings of the patient, is occasionally useful.

*Quercus Alba.* The decoction, with or without alum (℥ j. ad decocti ♁ j.), is a serviceable and safe vaginal injection

*Sponge Tents.* *Dilatation of the cervix* by sponge tents has been found by Dr. G. H. LYMAN and other gynecologists greatly to reduce the flow of blood in numerous cases of metrorrhagia. (*Amer. Gynecol Trans.*, 1877.) He believes that the real cause of the persistent hemorrhage is in many cases some peculiar condition of the cervix, which strangulates the circulation, the removal of which condition promptly arrests the flow.

*Heat.* Vaginal injections of water as hot as it can be borne prove of great service in many cases. Rubber bags or bottles filled with hot water, or a hot tile, plate or brick wrapped in flannel, applied to the sacrum, are likewise efficient. Bags of sand or salt may be heated and applied in the same manner. They should in all cases be *hot*, and not merely warm. Dr. JOHN CHAPMAN believes a temperature of 115° Fah. to be sufficient in nearly all cases.

*Hot Hand-baths.* Prof. J. QUISSAC, of Montpellier, recommends as a successful revulsive in metrorrhagia, soaking the hands in hot water. (*Thérapeutique Médicale*, 1879.)

*Cold* may be applied by cloths or ice-bladders to the uterus, vulva, and thighs; or Chapman's ice-bags to the sacrum; or by injections of ice-water into the rectum or vagina. Dr. T. G. THOMAS recommends that cold drinks only should be used, and the ingestion of all warm fluids strictly forbidden. In obstinate cases a change of residence from a warm to a cold climate often accomplishes a great deal of good. A lump of ice inserted into the vagina was the only hemostatic employed by Madame RECAMIER. Dr. L. S OPPENHEIMER, of Louisville, speaks strongly in favor of the cold hip-bath. (Louisville *Med. News*, Aug. 3d, 1878.) He says: "I have seen cases of metrorrhagia lasting for over a month, permanently cured by this method alone in a few days. The mode of administration of these baths is not that of an ordinary hip-bath, but differs in that the water must be *en courant*. The stream should be so gentle at first as not to be felt by the patient, and gradually increased in force. The whole bath should not last longer than two minutes on the first day, then upon each succeeding day the length of time increased one minute."

## HYSTERIA

Although hysteria is not absolutely confined to the female sex, its vast preponderance among them, and its very frequent, in fact almost invariable connection with some abnormal state of the reproductive system, renders it, for the most practical purposes, one of the diseases of women, and for that reason we shall treat of it here.

### PROF. AUSTIN FLINT, M. D., NEW YORK.

Of medicinal agents, *asafœtida* and *valerian* stand first. The *bromides* may often be prescribed with advantage; but they, like all narcotics and stimulants, must be continued for a short time only, as hysterical patients very easily drift into their habitual use.

The removal of associated disorders of any kind is an important part of the treatment. Especially should all ovarian and uterine diseases receive immediate attention. Ungratified sexual desire as a causative agency has been overrated; over-indulgence in sexual pleasure is more often a cause than continence. The propriety of advocating matrimony is doubtful. A very large proportion of hysterical cases are anæmic, and anæmia promotes hysteria, as it does other neuroses. To effect a restoration of the normal state of the blood, is generally a prominent indication.

The moral management of such cases always calls for the exercise of delicacy, tact, and firmness.

### PROF. WILLIAM AITKEN, M. D., EDINBURGH.

The following directions are given by this author as to what may be done during a fit of hysteria: Everything tight about the patient's person should be loosened. The window should be opened and the cold air allowed to blow over her. The hori-

zontal posture on a bed or the floor should be secured. This being done, many modes of further proceeding may be followed. Bleeding is, in all cases, of doubtful efficacy. When the jaw is locked, the following *enema* (recommended by Dr. WOOD) may be used:

90. ℞. Asafœtidæ, ℥ ij.
Aquæ, ♁ ss. M.
To be beaten up with the yolk of an egg.

Or, what is still better,

91. ℞. Olei terebinthinæ, f. ℥ ss.
To be mixed with the yolk of an egg, and then added to half a pint of water.

Another remedy is to *fill the mouth with salt.* But that which supersedes all others, and is unquestionably the best, is a *good drenching with cold water.* If the patient lie on the bed, the head should be drawn over its side, and a large quantity of water poured on it, from a considerable height, out of a pail, jug, or other large vessel, and directly over the mouth and nose of the patient, so as to stop her breathing and compel her to open her mouth. This practice is generally introduced into hospitals, and until it was adopted, it was not unusual to see three or four patients in hysteria in the same ward and at the same time. Under this practice, however, a hysterical case is rare, and the fit seldom occurs twice in the same person, and never becomes epidemic.

### DR. A. B. ARNOLD, OF BALTIMORE.

This writer remarks (*Med. and Surg. Rep.*, August, 1879,) that every physician has some favorite combination from this class of drugs, which the hysterical patient is recommended to keep on hand for emergencies. The following he has found to answer the purpose very well:

92. ℞. Ext. valerian. fl., f.℥ j.
Ext. sumbul. fl., f.℥ ss.
Tinct. castorei, f.℥ vj.
Spt. ether chloric,
Syr. aurant. cort., āā f.℥ iij. M.
One teaspoonful, frequently repeated.

THOMAS KING CHAMBERS, M. D., LONDON.

93. ℞. Acidi muriatici diluti, f.℥ iss.
Aquæ calefactæ, (95° F.) C xxx. M.
For a bath. This tonic warm bath is to be used once a day, in order to prepare the patient for a *shower-bath* twice a day.

Shower-baths, in hysterical cases are highly recommended by Dr. C. The making up the mind to the shock of a cold shower-bath is a capital exercise of the will. Such baths have also a good influence by arterializing the cutaneous circulation, driving the venous blood home to the heart and lungs.

Our author rings the changes upon the following prescriptions in the treatment of this disease:

94. ℞. Pilulæ asafœtidæ, No. xxx.
Three to be taken thrice daily.

95. ℞. Spiritûs ammoniæ fœtidæ, f.℥ iij.
A teaspoonful in water three times a day.

96. ℞. Tincturæ castorei ammoniatæ,
Aquæ fœniculi, āā f.℥ ij. M.
A dessertspoonful in water thrice daily.

97. ℞. Pilulæ galbani compositæ, No. xxx.
Two thrice daily.

98. ℞. Zinci valerianatis, ℥ j.
Syrupi, q. s. M.
Divide into twenty pills. One to be taken three times a day.

PROF. FELIX VON NIEMEYER, M. D., TUBINGEN.

98. ℞. Auri et sodii chloridi, gr. v.
Tragacanthæ, ℥ j.
Sacchari, q. s. M.
Divide into forty pills. Order at first one of these pills to be taken an hour

after dinner, and another an hour after supper. Afterwards order two pills to be taken at these hours, and gradually increase dose up to eight pills daily.

Dr. N. speaks of this preparation as a nervine of great efficacy in hysteria. He has made use of it with signal effect in many cases where there was no indication for the local treatment of uterine disease, or else where the hysteric symptoms persisted, although the local uterine affection had been cured.

### DR. F. T. PORTER, OF DUBLIN,

Has found (*Dublin Journal of Medical Science*, April, 1874,) the bromides to act most injuriously in hysterical cases, deranging digestion, weakening the heart, and retarding menstruation. He prefers the valerianates, hemlock, and lupulus. When there is spinal tenderness, he employs *iron*. When plethora is present, as evinced by increased temperature, vascular relaxation and contracted pupil, he considers *belladonna* a most efficacious remedy.

### DR. S. WEIR MITCHELL, OF PHILADELPHIA,

Believes that mimetic hysteria can be cured almost unfailingly; but to accomplish this the patient must be isolated from the cares and sympathy of home and placed in an institution under strict surveillance.

Valerianate of zinc in twelve grain-doses thrice daily is a valuable sedative. If there is marked anæmia, the patient should be put to bed and fattened by the use of massage, electricity, and excessive feeding.

### EDWARD JOHN TILT, M. D., LONDON.

| | | | | |
|---|---|---|---|---|
| 100. ℞. | Tincturæ castorei, | | f. ʒ iij. | |
| | Spiritûs lavandulæ compositi, | | f. ʒ vj. | |
| | Aquam camphoræ | ad | f. ʒ vj. | M. |

A tablespoonful two or three times a day when cerebral symptoms and hysterical phenomena are marked.

The therapeutical indications in the treatment of hysteria are: 1st. To blunt the sensitiveness of the nervous system by sedatives and antispasmodics, and to strengthen it by metallic and other tonics, and by hygiene. 2d. To cure all diseases of the sexual organs, and save the nervous system from visceral irritation, by good hygiene at menstrual periods; or by marriage, when the sexual organs crave their legitimate satisfaction.

### GERMAN PHARMACOPŒA.

| | | | |
|---|---|---|---|
| 10l. ℞. | Tincturæ asafœtidæ, | f. ʒ iv. | |
| | Tincturæ castorei, | f. ʒ iij. | |
| | Tincturæ opii, | f. ʒ j. | M. |

From fifteen to thirty drops, by the mouth or in enemata, twice or three times a day, in the hysterical attacks of dysmenorrhœa. Bitter drinks and preparations of iron in the intervals of the attacks, if the patient be anæmic.

## RÉSUMÉ OF REMEDIES.

*Æther.* Nothing, according to STILLÉ, so distinctly moderates the paroxysms of this disease as the inhalation of ether. Those who have found the spasms aggravated by a certain degree of etherization have not administered a sufficient quantity of the vapor. If persisted in, it would undoubtedly have put an end to the fit.

*Allium.* The smell of bruised garlic will sometimes promptly terminate a hysterical paroxysm.

*Atropia.* *In hysterical trismus*, nothing acts so well as hypodermic injections of this alkaloid. Full doses are required.

*Auri et Sodii Chloridum* is prescribed by Dr. NIEMEYER. (F. 98.)

*Aloes.* The pill of aloes and asafœtida is very serviceable in the constipation of hysteria.

**Ammonium.* The carbonate, the aromatic spirits, the fœtid spirit, the valerianate, and other preparations, are much used and of great value.

*Anthemis.* A wineglassful of the infusion of chamomile may be given with advantage thrice daily.

**Asafœtida* is a most valuable medicine in this disease. It may be given alone, or combined as directed in the following form:

102. ℞. Tincturæ asafœtidæ,
Tincturæ castorei,
Tincturæ valerianæ ammoniatæ, āā f.℥ij.
Aquæ camphoræ, f.℥vij. M.

Dose—One or two tablespoonfuls every hour. Asafœtida may also be given, in the form of an enema. (F. 101.)

*Aurantii Flores.* Orange-flower water is much used and valued in France. It is an elegant stimulant and antispasmodic, in doses from one to two fluid ounces.

*Cajuputi Oleum* internally is often of benefit.

*Camphora* is a very serviceable remedy, either alone or in combination with asafœtida or opium.

*Cannabis Indica* is sometimes useful.

*Chloroform* inhalation is highly praised by Dr. Brown-Séquard and Dr. Graily Hewitt, in severe and prolonged hysterical paroxysms. Internally it may be given with ammonia or asafœtida A liniment of chloroform often speedily relieves hysterical pain in the side.

*Cupri Sulphas*, in small doses, long continued, is recommended by Sir B. Brodie, in obstinate hysteria.

*Cusparia Cortex.* The infusion is an eligible light tonic in hysteria.

*Ferrum* is indicated in hysteria associated with anæmia. It may be given combined with valerian and other antispasmodics.

*Galbanum* sometimes agrees better than asafœtida, and may produce equally favorable results, particularly in cases associated with disordered uterine functions. A galbanum plaster over the sacrum often affords relief.

**Lavandula* is sometimes an effectual remedy.

*Lupulin* has been recommended in chronic hysteria, attended with morbid vigilance, in doses of ten grains every six hours.

*Moschus*, in doses of gr. x.–xv. thrice daily, is a valuable remedy, particularly when the surface is pale and the pulse languid.

*Potassii Bromidum* is sometimes a useful sedative in hysteria. Its use was suggested in this disease by Sir C. LOCOCK.

*Ruta.* From two to five drops of the volatile oil, on sugar, is a popular remedy; so also is the infusion of rue.

**Santonin* sometimes proves useful in revealing the true cause of the hysterical symptoms, viz., worms in the intestinal canal.

**Spiritus Ætheris Nitrosi* is often very effectual in relieving hysterical spasms.

*Terebinthinæ Oleum*, in enema, will often arrest a severe paroxysm when ordinary means fail.

**Valeriana* is a valuable remedy; it may be given both during the paroxysm and in the intervals.

*Zinci Oxidum* is considered by Dr. WARING–CURRAN as more efficacious in hysteria than the valerianate.

*Zinci Sulphas*, in the dose of one grain, combined with extract of gentian, in pill, two or three times a day, is a valuable remedy in cases of hysteria depending upon debility. It will be found to agree better with many women than the preparations of iron, causing less irritation.

*Cathartics* are to be administered if constipation exists, as it is important in hysteria to keep the bowels open. Aloes are indicated if there be torpor of the uterine system; mercurials or podophyllin, if there be biliary derangement; and salines, if there be plethora; but active purgation is in no case advisable.

### EXTERNAL REMEDIES.

**Shower-Baths* are indispensable in the treatment of the paroxysms. (See pp. 99, 100.)

*Dry Cupping* at the nape of the neck, between the shoulders, or below the clavicles, during a paroxysm of hysteria, has been found, by Dr. GRAVES, to be attended with the best results.

*Electricity.* Dr. LAYCOCK advises the persevering and systematic application of electro-galvanism to the abdominal and pelvic regions, in combination with the internal use of tar.

***Emetics.*** An emetic of ipecacuanha, given when the paroxysm is impending, often prevents it.

***Frigus.*** The sudden application of cold to the surface of the body, in hysterical cases simulating death, will revive the signs of life.

***Manipulation.*** Professor THIERRY, of the St. Pierre Hospital, Brussels, arrests hysterical paroxysm by what he calls "torsion of the abdominal walls." He grasps in his hands the entire walls of the abdomen, either in their bare state or covered with the chemise, and imparts to them a certain amount of torsion, which he gradually increases, and which he maintains until the paroxysm has passed away, and the woman is come entirely to herself.

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# CHLOROSIS.

This name, or that of *green sickness*, is given to the anæmic condition of young girls, associated with disordered menstrual function. The blood has an excess of fibrine, and undergoes some chemical change in its pigments which produces the greenish hue of the skin, whence the disease has its name. Attention to hygienic conditions, baths, nutritious food, regularity of the bowels, and judicious mental and physical exercise, are first in importance.

### DR. FREDERICK T. ROBERTS.

This writer on *Practice* considers *aloes* the best form of aperient, either the extract, or as *pil. aloes cum myrrhâ*. For the unpleasant sensations in the stomach, bismuth, with hydrocyanic acid, is particularly valuable. For the pain in the side often complained of, a belladonna plaster is usually efficacious. Iron is the great remedy; and it is frequently desirable to change the form of the preparation from time to time.

### PROF. A. P. REID, OF MONTREAL.

This writer (*Canada Medical Record*, 1875,) has adopted, with signal success, in uncomplicated chlorosis, the use of *liquor potassæ*, gtt. x.–xv., in mucilage, thrice daily. It defibrinizes the blood, and often acts promptly for good where iron is of no avail.

### DR. BRETONNEAU, FRANCE.

| | | | | |
|---|---|---|---|---|
| 103. ℞. | Ferri redacti, | | ʒ ij. | |
| | Quiniæ sulphatis, | | | |
| | Zingiberis pulveris, | āā | gr. vij. | |
| | Extracti cinchonæ, | | ℈ j. | |
| | Aloës socotrinæ, | | gr. iij. | M. |

Divide into fifty pills. One to five a day. These pills have the advantage of not causing constipation.

### DR. GAILLARD, PARIS.

| | | | | |
|---|---|---|---|---|
| 104. ℞. | Ferri carbonatis, | | | |
| | Extracti cinchonæ, | āā | ʒ ijss. | |
| | Extracti opii, | | gr. xv. | M. |

Divide into one hundred pills. From two to four a day, principally at meal-time.

When there is constipation, this formula ought to be modified as follows:

| | | | | |
|---|---|---|---|---|
| 105. ℞. | Ferri carbonatis, | | ʒ ij. | |
| | Extracti cinchonæ, | | | |
| | Extracti rhei, | āā | ʒ iss. | |
| | Extracti opii, | | gr. xv. | M. |

Divide into one hundred pills. To be taken as above.

### PROF. E. J. TILT, M. D.,

Believes that, in addition to the general treatment, we require some means of increasing ovarian energy. He directs the patient to wear during the day a bit of piline large enough to cover the ovarian regions, sprinkled with alcohol.

DR. LOMBE ATTHILL, OF DUBLIN

Regards *strychnia* as of the highest value; he gives five drops of the liquor strychniæ, equal to $^1/_{24}$ of a grain of the alkaloid, gradually increased to ten drops, three times a day, or combined with tincture of perchloride of iron. Strychnia acts as a powerful stimulus to the ovaries as well as a general tonic. When there is no anæmia, five drops of tincture of iodine, and five of solution of strychnia, are of great value.

For the constipation, he uses two grains of sulphate of iron with a quarter or half a grain of extract of aloes, three times a day. This often acts like a charm.

PROF. T. GAILLARD THOMAS, M. D., NEW YORK,

Regards the indications as to remove the cause, cure the neurosis, repair damages; then change of air, well-regulated open air exercise, sea bathing; tonics, as arsenic, strychnine and quinine. The continuous electric current and general electrization often are beneficial.

For the anæmia he gives:

| | | | |
|---|---|---|---|
| 106. ℞. | Ferri vini amari, | f.℥ vijss. | |
| | Tr. nucis vomicæ, | f.℥ iv. | |
| | Liq. potas. arsenit., | f ℥ ij | M. |

A dessertspoonful in a glassful of water just after each meal

GRAILY HEWITT, M. D., LONDON,

Regards the accompanying dyspepsia as best treated by food *frequently and in very small quantities* for days together, and of the simplest character, avoiding solids. Ferruginous preparations are essential, but should be given in small doses, and are best in the form of mineral waters.

HENRY M. FIELD, M. D., OF BOSTON.

In cases of females where their maladies were connected with

anæmia, indicating the use of iron, this writer has been very much pleased with the action of *oxalate of iron*, a preparation first brought to notice by Prof. CRAIG, of the Smithsonian Institute. It is a light and tasteless powder, with nothing repulsive in its appearance or odor. It may be given as a powder to those patients who object to the pill form. The dose is gr. ij.–iij. He states that it is less liable to cause irritation or constipation of the bowels than other ferruginous preparations, and many patients who have asserted they could not take iron in any form, have taken this without difficulty.

## RÉSUMÉ OF REMEDIES.

*Aloes.* This is frequently very efficient. (See page 107.)

*Bismuthi Subnitras.* Sir H. MARSH states (*Medical Press*, March 6th, 1867,) that in chlorosis, bismuth is an excellent substitute for iron, when the latter is not well borne.

*Cocculus Indicus* is recommended by PHILLIPS in chlorosis with amenorrhœa.

*Ergot* in five-grain doses, three or four times a day, is recommended by CHURCHILL, in chlorosis and leucorrhœa.

**Ferri Iodidum.* In chlorosis, accompanied by much torpor of the system, Dr. ASHWELL has found this salt particularly efficacious, in the following formula:

| | | | |
|---|---|---|---|
| 107. ℞. | Ferri iodidi, | gr. xvj. | |
| | Tincturæ calumbæ, | f.℥ j. | |
| | Aquæ, | f.℥ vij. | M. |

Take two tablespoonfuls twice a day.

**Ferri Mistura Composita, Ferri Chloridi Tinctura, Ferri et Quiniæ Citras, Ferri Sulphas*, and *Ferri Vinum*, are all excellent ferruginous preparations in chlorosis.

Sir H. MARSH advises (*Medical Press*, March 6th, 1867,) the following formulæ:

| | | | |
|---|---|---|---|
| 108. ℞. | Liquoris ammoniæ citratis, | f.℥ iij. | |
| | Ferri et quiniæ citratis, | gr. vij.–xxiv. | |
| | Syrupi, | f.℥ j. | |
| | Aquæ, | f.℥ iv. | M. |

Two tablespoonfuls three times a day.

109. ℞. Ferri sulphatis,
Aloës, āā gr. ij.
Pulveris cinnamomi, gr. v. M.
For two pills, to be taken at dinner-time, and repeated at night if necessary.

*Sodii Biboras.* Dr. COPLAND advises the following formula:

110. ℞. Sodii biboratis, ℈ij.
Sulphuris præcipitatæ, ʒj.
Mucilaginis acaciæ, q. s. M.
Make twenty-four pills. Three to be taken three times daily.

*Nux Vomica.* Dr. COPLAND has derived benefit in some obstinate cases of chlorosis from the following formula:

111. ℞. Pilulæ aloës cum myrrhâ, ʒij.
Extracti nucis vomicæ. gr. x. M.
Thirty-six pills. Take one to two night and morning.

*Potassæ Liquor* will occasionally overcome persistent anæmia which has defied all other means. Dose, ʒss.–j., largely diluted, two or three times a day.

[For the general treatment of Anæmia see further suggestions in *Napheys' Medical Therapeutics*, chapter VI.]

# THE CLIMACTERIC EPOCH, OR THE CHANGE OF LIFE.

PROF. ROBERT BARNES M. D., LONDON.

This author remarks that in many cases the local and constitutional disorders which attend the menopause are numerous and severe. Among these may be enumerated uterine and vicarious hemorrhages, a peculiar occipital headache, convulsive seizures, as vertigo and epilepsy, despondency, irritability, and loss of mental power, and various nervous disorders. Dyspepsia, colic, and excessive constipation are among the most common attendants. Hysteria and pseudocyesis are also frequent.

The principles of treatment are primarily to regulate the secretions, and exact a strictly hygienic mode of life. If the abdomen is large and the bowels distended with gas, a broad, well-fitting abdominal belt will give great relief. When the patient is plethoric and florid, the abstraction of eight or ten ounces of blood from the arm, or by half a dozen leeches behind the ears, or by cupping between the shoulders, will often be of signal service. As an alterative the *acetate of ammonia* is one of the best; it may be combined with colchicum or lithia if a gouty diathesis is suspected. A most valuable remedy is *bromide of potassium*, gr. x.–xx., two or three times a day, to calm and regulate the nervous centres. Quinine and strychnia are to be preferred as nerve tonics. To keep the bowels open the habitual use of laxative saline mineral waters is the most serviceable means.

DR. G. E. SUSSDORF, OF GERMANY.

In speaking of the general rules for the treatment of disease at the change of life, this author makes the following points. (*London Med. Record*, Dec., 1878):

1. The time of the menopause, as regards the inception and

aggravation of disease, equals in importance that of puberty, or any other epoch of life.

2. That while, as a rule, the majority of functional and organic diseases of the female generative organs decrease in intensity after the menopause, there is a considerable proportion of cases in which the reverse happens, even to the extent of the disease becoming malignant.

3. In many instances these latter cases do not present decided local symptoms of the pathological conditions present, but are indicated by general signs, which attract attention because they occur at that particular time of life.

4. In no case of general or local disorder, just before or during the menopause, should local examination be omitted, which will frequently reveal at a glance the origin of the hitherto inexplicable phenomena and also indicate the therapeusis.

5. Such therapeusis should be radical and effective, quite regardless of this particular time of life, the dangers of operating during which have been undoubtedly exaggerated.

### PROF. J. B. FONNSAGRIVES, OF MONTPELLIER.

The indications of treatment for the complications of the menopause are as follows (*Traité de Therapeutique Appliquée*. Paris, 1878):

1. *To combat the condition of general and local plethora.* No measure is so frequently successful as general bleeding, especially from the foot; or if the uterus is much congested, from the arm. The life should be active, the diet restricted, the sleep light, etc.

2. *To combat the menorrhagia.* The two most efficacious drugs are *ergot* and the *urtica urens*, as:

112. ℞. Ergotinæ,
Extracti matico, āā gr. xv. M.
Make ten pills. Give one every one or two hours.

The *urtica urens* may be given in decoction, ℥j. to aquæ ℧j.,

of which a wineglassful may be taken every hour or two. *Cold baths* taken twice a day during the intermenstrual period are often of service. Cold vaginal injections also are beneficial.

3. *To combat the nervous complications.* These must be treated in detail as they present themselves. An enlightened hygiene is all important. As a rule the use of alcoholics, spiced food, and venereal excitements should be prohibited. Dr. F. adds the advice, that after the permanent cessation of the menses, sexual approaches should absolutely cease, as they induce to the uterus a congestive afflux, which, useless for the function of reproduction, can only serve to cause various organic affections.

### PROF. FORDYCE BARKER, M. D., OF NEW YORK.

In menorrhagia associated with the climacteric period, the uterus is generally found somewhat increased in size and weight. When such is the case, Dr. BARKER directs the patient to use, for a week previous to the return of the expected period, rectal suppositories made after the following formula

| | | | |
|---|---|---|---|
| 113. ℞. | Extracti ergotæ aquosæ (Squibb,) | ℈ ij. | |
| | Butyri cocoæ, | ʒj. | M. |

Make twelve suppositories. Introduce one into the rectum morning, noon and night.

They should be carried well up into the bowel, and the patient should lie down for an hour afterwards.

Another plan of treatment, which is usually entirely successful if repeated for two menstrual returns, is to introduce into the cavity of the uterus cylinders of iodoform, made according to the following formula:

| | | | |
|---|---|---|---|
| 114. ℞. | Iodoformi, | ʒ ijss. | |
| | Gum tragacanthæ, | gr. xv. | |
| | Mucilaginis, | q. s. | M. |

Divide into ten cylinders, each one and one-half inches in length.

One of these is to be carried completely into the cavity of the

uterus, and a pledget of cotton introduced against the cervix to retain it in position. One of these is to be introduced daily for five or six days before menstruation. The iodoform has an unpleasant odor, but is the most efficient of all preparations which Dr. BARKER has tried in these generally obstinate and troublesome cases.

## RÉSUMÉ OF REMEDIES.

*Ammoniæ Acetas* is considered by Dr. BARNES the best of the saline alteratives.

*Carbolicum Acidum.* Dr. BARTLETT, of New York (*Buffalo Medical Journal*, Sept., 1878,) places great confidence in carbolized sponge tents introduced within the cavity of the uterus. He has never seen ill effects, and has frequently controlled, by a single tent, climacteric hemorrhages which had resisted the ordinary tampon and various astringents. He introduces the tent through the speculum, well up to the fundus, and tampons over it in the usual way.

*Ergota* is an invaluable drug in many cases. (F. 113.)

*Iodoform* is very highly praised by Dr. BARKER. (F. 114.)

*Matico* is given internally by Prof. FONNSAGRIVES. (F. 112.)

*Sodii Bromidum.* A writer in the *Chicago Medical Journal*, Jan., 1880, states that the following prescription is specially serviceable in the various nervous manifestations which often accompany the menopause:

115. ℞. Sodii bromidi, ʒ iv
Tincturæ nucis vomicæ, ʒ ij.
Elixir. calisayæ, ʒ ij.
Syrupi pruni virg., ʒ j.
Elixir simplicis, ʒ vj.

SIG.—Two drachms, two, three, or four times a day, as needed.

*Urtica.* The various species of nettle have long enjoyed a reputation as efficient hemostatics in the hemorrhage of the critical epoch. Dr. W. B. JOHNSON, of Alabama, speaks highly of the *urtica urens* (*New Orleans Medical and Surgical Journal*, vol. VI.,) and Prof. FONNSAGRIVES gives the weight of authority in its favor. (P. 3.)

*Purgatives.* Mr. LAWSON TAIT (*Diseases of Women*, 1879,) says that for the relief of nearly all the subjective symptoms of the climacteric period, he knows nothing better than the occasional use of a drastic purgative, and removal from home at frequent intervals. They take the place of bleeding, which, in small amounts, gives in some cases immense relief.

*Permanent Cautery.* It is taught by Prof. J. QUISAC, of Montpellier, (*Thérapeutique Médicale*, 1879,) that many of the troublesome symptoms which accompany the change of life can be avoided by establishing a permanent cautery or issue on the arm. This mode of treatment, now-a-days little employed, he believes will at times prevent the development of cancerous degeneration in tumors of the breast, and where these threaten, the establishment of an issue is formally indicated.

# CHAPTER II.

# DISEASES OF THE UTERUS AND ITS ANNEXES.

***Synopsis of Diagnostic Points—Metritis (Non-puerperal Endo-, Peri-, and Parametritis, Uterine Catarrh, etc.)—Cervicitis (Ulcerations and Granulations of the Os, etc.)—Displacements—Non-malignant Growths (Polypi, Fibroids, etc.)—Malignant Growths—Sterility and Anaphrodisia—Nymphomania.***

## SYNOPSIS OF DIAGNOSTIC POINTS.

### GENERAL OBSERVATIONS.

The most enlightened schools of modern gynecologists discountenance making gynecology a specialty, either in diagnosis or treatment. In other words, they insist on studying it as a department of general medicine. "There is, in truth," says Dr. ROBERT BARNES in a recent lecture (*Lancet*, May 25th, 1878,) "nothing more special in gynecology than there is in the study of heart disease, lung disease, or any other disease." And in the same spirit Prof. J. H. ETHERIDGE, of Chicago, writes (*Chicago Medical Journal and Examiner*, November, 1878): "Just so far as gynecologists can separate this so-called 'science' from the general science of medicine, will they obscure the mind of the ordinary practitioner with the error that gynecological cases need *special* care and skill, and are beyond the necessity for general prescribing"

As general rules in the diagnosis of uterine disease, Dr. BARNES recommends that all the functions and organs be studied in a certain regular order, as follows:

(1) Aspect, plumpness, color and state of the skin generally.

(2) The circulation, pulse, respiration, and temperature.

(3) Nutrition, the tongue, appetite, digestion, stomach, intestines, defecation, and bile.

(4) The urinary organs, the kidneys and bladder, as to pain, as to retention or other characters, as well as the characters of the urine itself.

(5) The nervous system, sleep, motor power, general languor or exaltation, excito-motory system, mental state, delirium, pain, and its seat and kind.

(6) The sexual organs, the menstrual functions, child-bearing, and the secretions.

All these phenomena should be, as far as possible, explored by the aid of manipulation, and the appropriate instruments of exploration. It is a dangerous thing to form a subjective diagnosis; it is equally dangerous to accept the diagnosis from the patient.

With regard to the special symptoms and signs which an examination of the uterus and uterine functions may disclose, we quote from a lecture by Dr. GRAILY HEWITT the following two lists the first (A) a list of the symptoms of all kinds which may be observed in connection with diseases or affections of the uterus, these symptoms being placed as nearly as possible in their order of frequency. The second (B) is a list of the various physical changes which the uterus may undergo:

## A. UTERINE SYMPTOMS.

Pain
1. Spontaneous.
2. Produced by motion (dyskinesia.)
3. Undue sensitiveness of uterus to touch.

Leucorrhœa.
Dysmenorrhœa.
Menorrhagia.
Amenorrhœa.
[If married—Sterility, abortions.]
Various reflex phenomena:—
1. Sickness or nausea.
2. Hysteria.
3. Convulsions.
4. Cephalalgia.
5. Melancholia.

Disturbance of functions of bladder.
Disturbance of functions of rectum.
Disturbance of sexual functions (dyspareunia.)

## B. Uterine Changes (non-organic.)

Change in position.
Change in size of walls.
" " cavity.
" " cervix.
Change in shape.
Change in patulency of canals.
Change in texture.
Undue hardness.
Undue softness.
Increased vascularity.
Disorders of innervation.
Increased secretion. .

Here, then, we have the data for the construction of a pathology of the uterus; all the possible changes on one side, all the possible effects on the other. It must be understood that organic diseases of the uterus, cancer and fibroid tumor, are excluded from the list, the nature, course, and effects of these organic diseases being better understood. It must not, however, be forgotten that these organic diseases may occasion one or all of the uterine symptoms.

### UTERINE INFLAMMATIONS.

Are usually divided into the acute and chronic forms of metritis, endometritis, cervicitis, and endocervicitis. The distinction has also been made between parametritis and perimetritis, and various forms of inflammation of the os, granular, catarrhal, ulcerative, etc.

So far as treatment is concerned, in nearly all cases it is sufficient to distinguish between cervicitis, in which the os is alone or principally affected, and metritis, in which the body of the womb is also implicated.

The distinctions which have been drawn between endometritis and endocervicitis, are compared by Dr. Etheridge on the following page:

| | 1. Metritis. | | 2. Cervicitis. |
|---|---|---|---|
| | Acute. (*Very rare.*) | Chronic. | Chronic. |
| 1. General symptoms. | *a.* Violent pelvic pain, accompanied with rectal, vesical, and uterine tenesmus, and sometimes with nausea and vomiting.<br>*b.* Pressure over abdomen reveals great sensitiveness. | *a.* Dull, heavy, dragging pain in pelvis, increased by locomotion.<br>*b.* Defection and coition painful.<br>*c.* Menses accompanied with pain, which begins several days previous.<br>*d.* Pain in mammæ during and before menstruation.<br>*e.* Darkening of areolæ of the breast.<br>*f.* Nausea and vomiting.<br>*g.* Great nervous disturbance.<br>*h.* Pressure on rectum, with hemorrhoids and tenesmus.<br>*i.* Pressure on bladder, with vesical tenesmus. | *a.* Pain in back and loins.<br>*b.* Pressure on bladder and rectum.<br>*c.* Painful and sometimes profuse menstruation.<br>*d.* Difficulty of locomotion.<br>*e.* Nervous disorders.<br>*f.* Pain during sexual intercourse.<br>*g.* Dyspepsia, headache, general lassitude and debility. |
| 2. Touch | *a.* Vagina hot and dry, unless, from coexisting endometritis, there be purulent discharge.<br>*b.* Organ low in pelvis, os enlarged, cervix swollen, pressure on cervix very painful.<br>*c.* Painful tenderness most apparent upon rectal touch and conjoined manipulation. | *a.* Enlargement.<br>*b.* Tenderness. | *a.* Uterus low down.<br>*b.* Cervix large, swollen, and painful, and os may admit finger.<br>*c.* Usually tenderness. |
| 3. Speculum. | *a.* Usually produces too much pain to be used. | Nothing revealed specially. | Confirms signs evinced by touch. |
| 4. Probe | *a.* Produces intolerable pain, and cannot usually be resorted to. | *a.* Usually reveals some flexion or version, tenderness. | Reveals great sensitiveness before reaching os internum, but nothing beyond that. |

| | 3. Endometritis. | 4. Endocervicitis. | |
|---|---|---|---|
| | Chronic. | Acute. | Chronic. |
| General symptoms. | *a.* Leucorrhœa: streaked, glairy, and bloody.<br>*b.* Menstrual disorders.<br>*c.* Pain in back, groins and hypogastrium.<br>*d.* Nervous disorders.<br>*e.* Tympanitis.<br>*f.* Symptoms of pregnancy.<br>*g.* Sterility. | *a.* Dragging weight and pain in pelvis, pain in back, groin and thighs.<br>*b.* Rectal and vesical tenesmus.<br>*c.* Purulent discharge, sometimes bloody after 3 or 4 days.<br>*d.* Tympanitis and tender abdomen. | *a.* Dragging sensation in the pelvis.<br>*b.* Pain in back and loins increased by exercise.<br>*c.* Profuse, irritating leucorrhœa, like boiled starch.<br>*d.* Menses, too scanty or *vice versa*, too frequent or *vice versa*.<br>*e.* Nervous, irascible, moody, or even hysterical.<br>*f.* Digestion impaired, ultimately spansemia, sometimes nausea, etc. |
| Touch. | *a.* Conjoined manipulation reveals tenderness of fundus. | *a.* Vagina hot and dry, or covered with above discharge.<br>*b.* Os gaping, cervix swollen and tender, body slightly enlarged, whole organ lower in pelvis than normal. | *a.* Os in normal position, may be enlarged, lips puffy or may be roughened.<br>*b.* Pain results from placing the finger under the cervix and pressing upwards. |
| Speculum. | *a.* Reveals nothing special. | *a.* Cervix puffy, swollen and red, fluid exuding from os, either clear, albuminous looking, muco-pus, or stringy and tenacious. | *a.* Long, stringy, tough, tenacious mucus, difficult to remove, exuding from os.<br>*b.* Cervix not usually enlarged, may be puffy and swollen and very red, as if ulcerated, due to removal of investing epithelium. |
| Probe. | *a.* Patulous os internum.<br>*b.* Uterine cavity prolonged.<br>*c.* Tenderness. Withdrawal followed by blood. | *a.* Great tenderness throughout whole organ, and removal followed by a few drops of blood. | *a.* Meets with obstruction at os internum.<br>*b.* Does *not* produce pain by striking against the walls of the fundus, nor is its removal followed by blood or mucus. |

# METRITIS (NON-PUERPERAL, ENDO- PERI-, AND PARA-METRITIS, UTERINE CATARRH, ETC.)

PROF. WM. H. BYFORD, M. D., OF CHICAGO.

The treatment of chronic inflammations of the uterus is divided into the general and local treatment.

*General Treatment.* The patient must be placed under the best practicable hygienic and dietetic rules, and sexual congress forbidden during treatment. For the nervous prostration, *fresh and cold air* is one of the most valuable tonics. The patient should be in the open air as much as possible; or if confined to the house, she should be well covered, and all the windows and doors of the room thrown open several times daily She should keep in open cold rooms; and the use of stimulants, to which such cases are given, should be forbidden. For the nervous excitability, regular rest, exercise, and outdoor exposure, are the most efficacious means. Medicines, as a rule, are not well borne in these cases. Quinine, nux vomica, wild cherry and chamomile, are the best. Stimulants must be exhibited cautiously, and opium is generally not well borne. Nervous headache, insomnia and neuralgic pains, are often greatly relieved by bromide of potassium in full doses (gr. xxx.–lx. every hour in abundance of water, until relieved). Anæmia and plethora, if present, must be appropriately met. Constipation is often present, and must be overcome by prompt attention to the desire of defecation, by a full vegetable diet, especially fruits, and by drugs. Of the latter, sulphate of magnesia, ʒ ij.–iv., may be given with some acid in the morning; or gr. vj.–x. of blue mass may be given every fourth or fifth night, followed by Epsom salts in the morning. When, through long habit, the secretions of the intestines are scanty, and their coats atonic, a special tonic is called for. Simple and effective formulæ are;

116. ℞. Strychniæ sulphatis. gr. j.
Ferri sulphatis, gr. viij.
Acidi sulphurici diluti, q. s.
Aquæ, f. ʒ ij. M.

For a solution. One teaspoonful three times a day after eating.

117. ℞. Strychniæ sulphatis, gr. j.
Extracti rhei, ℈ iss.
Sulphatis ferri, gr. x. M.

For sixteen pills. One to be taken once, twice or three times a day, as may be necessary.

118. ℞. Quiniæ sulphatis, gr. j.
Pulveris nucis vomicæ, gr. v. M.

For one pill. To be taken after each meal.

These are our most valuable remedial agents. *Massage* is not unfrequently a valuable aid. (See *Résumé of Remedies* for the method employed.) Cold water may be thrown into the rectum twice a day in small quantities, say f. ʒ viij. Or a suppository may be used, as

119. ℞. Extracti gentianæ, ℈ j.
Butyri cocoæ, q. s. M.

For a rectal suppository.

Quinine, gr. v., may be employed in a similar manner.

As a means of relaxing the sphincter ani, and removing its irritability, we can sometimes employ with advantage an ointment of belladonna:

120. ℞. Extracti belladonnæ, ʒ ij.
Unguenti simplicis, ʒ j. M.

Apply to the anus externally on going to bed at night.

When the rectum is weak and becomes readily filled with accumulated fæces, this can in a measure be prevented by wearing an air or sponge pessary, which will press the rectum against the sacrum and thus reduce its capacity.

*Local Treatment.* Of the local measures employed, *baths* may be first mentioned. *Injections* are internal baths. The most common bath is the sitz, or hip-bath. Where there is much pain, with little inflammatory action, this often affords great

relief. In many cases the patient can advantageously introduce a speculum while in the bath, so that the medicated water can readily reach the uterus. That temperature should be chosen which is most comfortable to the patient. Vaginal *injections* are applicable to almost all cases of cervical inflammation. Dr. BYFORD condemns intra-uterine injections as dangerous. The quantity of simple injections should generally be large—from one to eight quarts. Astringent injections ought not to be used more often than twice a day, the rule being never to repeat so long as the vagina is dry from the preceding one. The temperature should be governed by the feelings of the patient.

Anodyne, astringent and alterative suppositories, pessaries, and powders may be resorted to with profit in many instances. The "suppository syringe" will enable the patient to place ointment in contact with the uterus very conveniently. In using narcotics in the vagina, the proper dose is double that by the mouth. The vaginal mucous membrane absorbs much more slowly than that of the rectum.

The local remedies mostly employed by Dr. B. are the various depletory measures, nitrate of silver, tannin, acid nitrate of mercury, nitric acid, and caustic potassa.

*Nitrate of silver* he prefers in the solid form. It should be slowly and gently passed over the inflamed or ulcerated part. If we use no more force than is necessary to keep it in contact with the part, there is no danger of keeping it there too long. It can be applied about once in six days. If applied in solution it should be strong—one part to four of water. It is not so applicable in aged persons, and they are often made worse by it. Creosote or caustic potassa is better in these cases. It also sometimes causes such severe pain that a substitute must be found.

### DR. LOMBE ATTHILL, OF DUBLIN.

*Chronic Endometritis.* This disease presents itself in two forms, requiring different treatment. 1. As it appears in women who have borne children; and 2, in nulliparæ and virgins.

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In women who have borne children the os is patulous and the sound is readily introduced, although causing pain. The lips of the os are usually swollen and soft. An important preliminary step in such cases is *local depletion* by puncturing the cervix. One or two punctures, one-eighth of an inch in depth, will generally be followed by sufficiently free bleeding. To this should follow the application of strong caustics to the interior of the uterus. Dr. A. prefers *nitric acid* and the solid *nitrate of silver*. Nitric acid seldom causes any pain if properly applied, and it has a wonderful effect in bringing about a healthy condition of the mucous membrane. It is readily applied on cotton, through the author's platinum canula or similar instrument. Carbolic acid may also prove serviceable in mild cases. If vegetations on the endometrium exist, they should be removed with the curette before the caustic is applied.

In virgins and women who have never been pregnant, endometritis is usually accompanied by an elongated, probably swollen and congested cervix uteri, with a very small os from which a clear and slightly viscid discharge exudes. Flexion of the fundus is also often present. In these cases the first indication is *division of the cervix*, so as to insure a free escape for the contents of the uterus. Often this procedure will be suffi ient; if it is not, we should have recourse to the subsequent treatment of the unhealthy mucous membrane by the application of carbolic acid, or some similar agent.

Dr. A. regards *blisters* as of great value in chronic metritis and endometritis, where local blood-letting does not relieve. He applies them of small size, about two inches in diameter, and repeats them at intervals of a few days, placing them alternately over the sacrum and over the pubes, or over the ovary, if that be the chief seat of pain.

In debilitated patients the application of *iodine* is preferable to blisters, as it does not weaken so much. Its use must be continued for weeks, and it is best to direct it to be rubbed in over a limited space only, and when that spot becomes tender, to apply it to an adjoining part.

To relieve the distressing *backache* in these affections, Dr. A. recommends:

121. ℞. Linimenti camphoræ comp., f.℥x.
Tincturæ aconiti,
Chloroformi, ää f.℥iij. M.

For a liniment.

Or,

122 ℞. Unguenti veratriæ,
Unguenti potassii iodidi, Partes equales. M.

For an ointment.

Either of these is to be well rubbed in over the seat of pain.

### DR. L. PLAYFAIR, LONDON.

This writer observes that in many long-standing cases of uterine catarrh it is vain to expect a permanent cure by any means which do not act directly on the seat of the disease, which is the lining membrane of the cavity of the uterus and cervical canal beyond the external os; accompanied, of course, with secondary morbid states of the body of the uterus and cervix, such as hypertrophy, congestion, etc. Rest, applications to the exterior of the cervix, and general treatment, will unquestionably cause a temporary improvement, but on a recurrence to the old habits of life all the old symptoms return. There are serious objections to intra-uterine injections, unless the *os is first dilated with laminaria tents*, as they are apt to bring on severe uterine colics. By means of fine probes of whalebone or flexible metal round which a thin film of fine cotton-wool is wrapped, alterative applications can readily be made to the interior of the uterus, without pain or danger. In the very numerous cases in which this plan of treatment has been carried out, in no single instance has anything but the greatest benefit accrued. It is no doubt advisable to select the cases judiciously, and where there is much uterine tenderness, intra-uterine treatment should be postponed until this has been diminished by rest, leeching, etc.;

but with proper precaution the treatment is perfectly safe. A concentrated solution of *carbolic acid, eighty parts to twenty of water*, is used, and it acts so well that for a long time nothing else has been employed. After the first application, the discharge is sometimes increased, but after the second or third it is generally greatly diminished, and a single application is often sufficient to cure superficial erosions of the cervix. As a rule, there is no difficulty in passing the probes, as in the true uterine catarrh the os is invariably patulous.

### DR. L. DE SINETY, OF PARIS.

*Metritis.* This author rejects the classification of metritis into internal and parenchymatous, believing that it is useless for practical purposes. He also believes, contrary to many, that acute metritis is occasionally found in unmarried women. The treatment depends upon the stage of the disease. At the outset he recommends fifteen or twenty leeches to the abdomen, complete warm baths prolonged two or three hours or else ice-bags to the abdomen and opiates internally. Opium may also be employed profitably by rectal injections. In the early stages of the malady the speculum must not be used, but later it may be introduced and scarifications made on the os. This local bleeding may be repeated every third day, and it will often prevent the inflammation from becoming chronic.

When the disease is in its chronic stage iron and the bitters are nearly always required. Alcoholic tonics, however, are injurious, and sometimes iron aggravates the disease. For local treatment astringent injections are of little value; nor have cauterizations of the cervical cavity proved much better. Sometimes pencils of tannin and carbolic acid left to dissolve in the cervical canal have done well.

| | | | |
|---|---|---|---|
| 123. ℞. | Acidi carbolici crystal., | gr. iv. | |
| | Glycerinæ, | gtt v. | |
| | Acidi tannici, | ʒjℏ. | |
| | Pulv. tragacanth, | q. s. | M. |

For pencils three centimetres long and three or four millimetres in diameter.

Nevertheless, he prefers liquid caustics, especially *chromic acid*, which, with certain precautions, he claims presents great advantages in the treatment of uterine affections. He uses a solution of equal parts of crystallized chromic acid and distilled water. In the intervals between the periods of cauterization he advises daily dressings with tampons wet with the following mixture:

| | | |
|---|---|---|
| 124. ℞. | Acidi carbolici cryst., | gr. v. |
| | Alcoholis, | gtt x. |
| | Glycerinæ, | f. ℥ j. |
| | Acidi tannici, | gr. xxx. M. |

In the *hemorrhagic* form of the disease digitalis, quinine and ergot have been recommended. None of these means has given satisfaction. It is better to cauterize the interior of the uterus with the solid caustic. After this operation the patient should keep her bed one or two days.

In regard to intra-uterine injections, our author believes that they should be reserved for cases in which every other means have failed on account of the hemorrhages sometimes following them.

*Chronic Parenchymatous Metritis.* In this variety Dr. SINETY believes that ergot is indicated in cases resulting from subinvolution after confinement. It may be employed either by the mouth or by subcutaneous injections of ergotine. Sometimes this reduces hypertrophy of the uterus in a few weeks, but at other times fails entirely. Hydrotherapy renders very great service if carried out. Simple baths of an hour in duration every day are often successful. Thermal waters have many advocates, but they must be directed with great caution, and the indications are by no means clear for their use. Generally speaking, uterine and vaginal douches should be avoided; and weak alkaline waters preferred to others.

Locally, scarifications of the os every four or five days are required at the outset, especially when the organ is red and injected. When it is pale, hard and resisting the actual cautery

gives good results. This operation is not painful when properly performed.

Various complications occur in this disease, such as pruritus vulvæ, cystitis, dyspepsia, etc., which must be treated as they arise. Conjugal relations should be forbidden, and exercise enjoined.

*Uterine Dyspepsia.* Among the complications of uterine inflammation, *dyspepsia* is one of the more frequent. A writer in the *Révue Méd. Chirurgicale des Maladies des Femmes*, Feb., 1880, says that whatever be the form of it, is admirably treated in lymphatic temperaments by means of the *bromurated tincture of iodine:*

125. ℞. Tr. iodinii, 1 grm.
Potass. bromidi, 4 "
Syr. tolutani, 300 " M.
A dessertspoonful before each meal.

In the strumous it is better to employ the iodurated tincture.

In arthritic subjects, *sulphur* with magnesia is that to which we should give the preference:

126. ℞. Sulphur. sublimati, 2 grm.
Magnes. calcinatæ, 4 " M.
For ten powders.

The solution of *arseniate of soda*, one to ten thousand, should be used in the dyspepsia of those of herpetic diathesis, affected with uterine diseases:

127. ℞. Sodii arseniati, 10 centigrm.
Aquæ fontani, 1 litre. M.
A dessertspoonful in the middle of each meal.

The constipation which is generally present in these cases, should be combated at the same time.

*Perimetritis or Pelvi-peritonitis.* The treatment will vary with the intensity of the attack and the stage at which it has

arrived. About one-half the cases of this disease follow child-birth.

During the early acute stage a dozen leeches should be placed on the abdomen; remission from pain should be secured by full doses of opiates, with which may advantageously be combined small doses of calomel (one or one and one-quarter grains hourly for five to ten hours.) An ointment of belladonna and mercury may be applied to the abdomen. Warm poultices, injections and baths are valuable. The rectum should be emptied.

The acute symptoms having subsided, the next indication is to attack the organized products of the inflammation. In spite of the criticisms upon them, Dr. De S. employs scarifications of the neck. Leeches to the spot and flying blisters on the abdomen are also efficient. Iodine ointment, and the introduction daily into the vagina of masses of charpie wet with a ten per cent. solution of iodide of potash, are both efficient. Fifteen to thirty grains of the iodide may be administered daily by the mouth, providing it does not induce gastric troubles. The general health must be supported by iron and hydrotherapic treatment. The following *alkaline bath* is especially valuable when all pain has disappeared:

| | | | |
|---|---|---|---|
| 128. ℞. | Sodii carbonatis, | ℥ iij.–v. | |
| | Potassii iodidi, | ℥ vi. | |
| | Aquæ, | q. s. | M. |

For a bath.

Two symptoms require special measures. One is a tendency to vomiting. This should be met by suspending drinks, giving small pieces of ice, and establishing a blister the size of half a dollar on the epigastrium, which should be dressed twice daily with a fourth of a grain of morphia. The second is swelling (*ballonnement*) of the abdomen. This can be reduced by ice poultices, or ordinary poultices sprinkled with camphorated oil.

The most difficult question to decide is the proper time for surgical interference. In general, it is best to leave to nature prevalent collections arising from perimetritis; those authors

who recommend incisions have confounded this complaint with abscess of the broad ligament. In true peritoneal phlegmasiæ it is best to let the pus evacuate itself.

The regular rectum of the menses is the most positive sign of a complete cure.

### DR. HICKINBOTHAM, OF BIRMINGHAM, ENGLAND,

In a paper in the *Birmingham Medical Review*, June, 1880, speaks of that form of subacute endometritis which occurs in weak, ill-nourished women after child-birth:

Until a recent date astringent vaginal injections were the only means employed for the cure of such cases; but when the use of the speculum became fashionable, so did the use of the nitrate of silver application to the cervix uteri. Still more recently, intra-uterine cauterization has become the favorite method. But all of these methods the writer holds to be in the main most unsatisfactory. The plan which he advocates, and which he has found much less disappointing, is, first, to improve the general health and give tone to the nervous system; secondly, to rest and soothe the irritated periphery by the intra-uterine application of anodynes, especially of morphia and belladonna. Where there is much thickening, local scarification and the glycerine tampon are used, and if aching continue after acute symptoms have subsided, blistering over the sacrum is recommended. Mechanical and functional rest, so far as possible, are also enjoined. The chief internal remedies employed are phosphorus, iron, and sometimes strychnia and bromide of potassium. The point of a Playfair's probe may be smeared with soft extract of belladonna and passed into the womb, and allowed to remain there a few seconds; or morphia may be used in the same manner by taking up one-third or one-half a grain on the point of a moistened probe or sound. Belladonna plasters on the sacrum, opiate suppositories, the glycerine tampon, local scarification, all prove occasionally useful. When much aching remains after the acute symptoms have disappeared, a blister over the sacrum will generally remove it.

PROF. ROBERT BARNES, M. D., LONDON,

In cases of simple metritis, applies twelve to twenty leeches above the pubes. A plasma consisting of one drachm of extract of belladonna, mixed with half an ounce of mild blue ointment, and two ounces of simple cerate, spread thinly on lint and applied to the hypogastrium, the whole covered with cotton wool, will give ease and subdue the inflammation. Tepid vaginal irrigations with water or decoction of poppyheads, or with laudanum, are useful. One grain of calomel with half a grain of opium may be given every six hours for a day or two, taking care not to salivate. Next salines, especially the acetate of ammonia, and nitrate of potassa, with sedatives, are useful. When there is septic infection, avoid leeches. Use the plasma as above, and salines combined with quinine and tonics. Offensive discharges are to be corrected by intra-uterine injections of permanganate of potassa in carbolic acid.

In the chronic form, it is important to aid the womb in throwing off its congestion, and hence support by a proper pessary is very useful. Warmth is of great service, as by heated bags of salt or bran, or water to the hypogastrium, or even the whole, or hip-bath, at 90° to 95° F. Free access must be given for the warm water to the vagina, by the use of the bath speculum. Irrigation may be employed, as the use of the patent syringe to play upon the cervix for fifteen or twenty minutes at a time. The general treatment must be tonic.

PROF. T. GAILLARD THOMAS, NEW YORK,

Insists upon perfect rest in bed. He applies warm poultices in towels wrung out of hot water to the hypogastrium, and covered with oil-silk. The patient should be kept under the moderate use of opium.

In chronic cervical endometritis, he relies upon *general regimen*, as the removal of depressing influences, etc.; vegetable tonics, mineral acids and iron; appropriate diet, but no stimu-

lation; fresh air and exercise. As a tonic and cathartic he gives:

129. ℞. Magnesiæ sulphatis, ℥ ij.
Ferri sulphatis, gr. xvj.
Ac. sulph. dil., f. ℥ j.
Aquæ, Oj. M.
Two tablespoonfuls in a tumbler of iced water daily on rising.

Or,

130. ℞. Sodii et potassii tart., ℥ ij.
Vini ferri amari, f. ℥ ij.
Ac. tartarici, f. ℥ iij.
Aquæ, f. ℥ xiv. M
Two tablespoonfuls as above.

If necessary, the draught may be repeated during the day.

As a digestive tonic, he gives:

131. ℞. One rennet washed and chopped,
Sherry wine, Oj.
Macerate for twelve days, decant, filter, and add
Ac. muriat. dilut.,
Tr. nucis vom., āā f. ℥ ij.
Bismuthi subnit., ℥ ij. M.
One teaspoonful in a quarter of a tumbler of water, before each meal.

*Emollient Applications.* Irrigations for twenty or thirty minutes of the cervix night and morning by warm water, with the addition of salt, glycerine, boiled starch, infusion of linseed, slippery-elm, or tincture of opium.

*Alterative Applications.* First, dilatation of the cervix. The surface having been thoroughly cleansed, it should be well painted with a saturated solution of copper, zinc or lead. Next a bit of cotton with a piece of stout thread attached, dipped in glycerine, should be applied to the cervix. This treatment may be repeated once a week.

Or applications may be made by means of the probe wrapped with cotton, which is then saturated with the solution to be employed.

LAWSON TAIT, F. R. C. S., BIRMINGHAM.

The treatment of *chronic metritis* consists most essentially in absolute rest in bed during the menstruation, and total suspention of marital life. For medicines there is nothing like bromide of potassium and ergot, and there is nothing so bad as iron. No matter how anæmic the patient is, iron should not be given until the uterine condition is cured, after which, indeed, it will often work marvels. Intra-uterine remedies are powerful adjuvants. Desiccated sulphate of zinc, carbolic acid, and even nitric acid, may be used. Where the chronic metritis is the result of an acute process, very great caution must be observed in applying any intra-uterine medication, lest the original mischief be re-excited.

*Acute Endometritis* is nearly always the result of gonorrhœal infection. Its characteristic signs are severe pain, some fever, tenderness of the uterus, and a profuse yellow purulent discharge from the os. The treatment is rest in bed, pessaries of lead and opium, hot fomentations over the abdomen, or even a blister, with general antiphlogistic measures. Both vaginal and intra-uterine injections are to be sedulously avoided.

*Parametritis* often occurs in the first few months of wedded life. Its treatment is by absolute rest in bed, with opiates and warm fomentations or poultices. If the tumor can be felt from the vagina, it should be tapped as soon as the indications of pus are clear.

PHILADELPHIA HOSPITAL.

*Perimetritis.* As regards internal remedies, one-twenty-fourth of a grain of the bichloride of mercury, with ten grains of the muriate of ammonia, are given three times each day in the mist. glycyrrh. comp. A pessary of cotton is constructed, which can be so adjusted as to hold the womb up. This cotton is dipped in a solution containing three-quarters of a grain of morphia to the drachm of glycerine. The morphia allays the pain and reduces the inflammation, and the glycerine usually sets up a

copious watery discharge from the vagina. Iron is not employed until late in the progress of the disease.

After the inflammation is subdued, the patient is put upon the following mixture:

| | | | | |
|---|---|---|---|---|
| 132. ℞. | Hydrarg. chloridi corros,. | | gr. j. | |
| | Liq. chloridi arsenitis, | | f. ʒ ss. | |
| | Mist. ferri chloridi, | | | |
| | Acid. muriat. dil., | āā | f. ʒ ij. | |
| | Syrupi, | | f. ʒ iij. | |
| | Aquam, | q. s. ad | f. ʒ vj. | M. |

Sig. One tablespoonful after each meal.

## DR. ROBERT BATTEY, OF ROME, GEORGIA.

This writer has found of excellent effect what he denominates *idodized phenol.* (*American Practitioner*, Feb., 1877.)

| | | | |
|---|---|---|---|
| 133. ℞. | Iodinii, | ʒ ss. | |
| | Acidi carbolici crystal., | ʒ j. | M. |

Combine by gentle heat.

This is an energetic escharotic and alterative, and may be used, applied on lint or cotton, to cancerous surfaces. But for metritis, chronic affections of the cervix, hypertrophy, and sub-involution, he takes the following:

| | | | |
|---|---|---|---|
| 134. ℞. | Phenol iod. (F. ), | ʒ iss. | |
| | Acidi carbolici crystal., | ʒ j. | |
| | Aquæ, | f. ʒ ij, | M. |

Make a solution.

This is to be used either of full strength or diluted with glycerine, to one-half, one-third, or one-fourth, according to the nature and requirements of the case. It is applied on cotton, the interior of the canal and uterus being mopped out (after the dilatation of the inner os), with the fluid.

Dr. Battey uses a slender, elastic, hard-rubber probe, and describes the preparation, use and effects of the application in the following language:

"From the cotton factory is obtained cotton-wool in the form of an untwisted rope or coil, the fibres of the cotton being per-

fectly straight and lying parallel to each other. This is technically known to cotton-spinners as 'the lap,' and is admirably suited for gynecological uses. Having selected six or eight of the elastic probes, I break off from the cotton 'lap' four or five inches, and, with my fingers, separate or split it into several fasciculi of such sizes as, when wound on the probes, will enlarge them to the thickness desired. The end of a probe is now slightly moistened, and the fasciculus of cotton wound spirally upon it. The cotton-armed probe is dipped into iodized phenol; any redundancy is allowed to drip away, and the probe is passed into the uterus with a slow spiral movement as it advances. At first it is introduced but a short distance, and immediately withdrawn, and the case rests here to test the tolerance by the uterus of the remedy. At subsequent stages the probe may be carried to the fundus, and followed immediately by a second, and even by a third or fourth, if well borne. The remainder of the wrapped probes are employed for wiping off the cervix or vaginal wall any of the phenol that may have touched these parts. The energy of the application is regulated by the size of the wrapping, the depth to which the probe is passed, and the number of medicated probes used. When a very decided impression is to be made, a backward turn is given to the probe on its withdrawal, so as to leave the saturated cotton in the uterus, there to remain twenty-four hours, or even until it is spontaneously expelled. The application is renewed every four to fourteen days, according to the energy of the treatment. I have abandoned the use of sponge-tents in connection with the treatment set forth. When dilatation is required, the cotton-wrapped probe is employed, and the cotton left as a soft tent in the canal. The dilating power of this is notably less than that of sponge, but nearly equal to that of sea-tangle, and it is believed to be entirely safe.

"The results are the following: 1. A perfect removal of all cervical mucus, which is promptly coagulated, and comes away closely adhering to the cotton. The probes subsequently passed bring the remedy directly in contact with the diseased surface. 2. Always comparative, and usually entire, freedom from pain.

Carbolic acid is a local anæsthetic, and so numbs sensibility as to make the energetic application of the iodine for the most part entirely devoid of pain. 3. The iodine is so rapidly absorbed that the patient ordinarily remarks the metallic taste in five or ten minutes. 4. Softening and more or less dilatation of the cervix and os. 5. Temporary arrest of leucorrhœa, followed by (6) watery and sometimes bloody discharge. 7. Exfoliation of the superficial layer of the mucous membrane, which comes away in shreds, sometimes entirely, and resembles glove-kid. 8. Abrasions of the os promptly heal. 9. Induration of the uterus soon disappears. 10. Leucorrhœa is permanently arrested. 11. Villosities of the endometrium are removed without resort to the curette. 12. Subinvolution of the uterus disappears. 13. The menses become regular and healthy; menorrhagia and scanty menstruation as well as dysmenorrhœa, are remedied. 14. The appetite and digestion are improved, and this often without the use of medicines. 15. The form of the cervix and os is often completely changed; a large puffy cervix, with patulous, slit-like os, becomes even virginal in type after long use of the remedy. 16. Stenosis has not in any case been noted to follow the treatment. 17. Barrenness of from nine to fourteen years' duration has been removed in several instances."

### DR. H. V. TALIAFERRO, OF ATLANTA, GEORGIA.

*Pressure in Uterine Diseases.* This practitioner has brought prominently to notice the application of pressure in diseases of the uterus, especially in the forms of chronic metritis (*Trans. Med. Assoc., Ga.*, 1878.) The pressure is exerted by filling the vagina firmly with well-prepared cotton or sheep's wool, in the manner of a tampon.

In commencing the use of this tampon, the vagina should not be *entirely filled*. It is better to fill first the upper portion of the canal, which may be done quite tightly, and gradually to encroach upon the entire canal as it becomes inured to the foreign substance. Not unfrequently the tampon will irritate the vagina

in the commencement of treating by its use, when it should be left off for a day or two, and hot water injections substituted. If, however, there be but little irritation, the use of a little simple cerate, or better, vasaline, upon the vaginal surface, will enable us to continue the tampon.

He is convinced that in this method we have a remedy for the rapid reduction of chronic congestions of the part, superior to any other. In adhesions of the uterus, with inflammatory deposits, however extensive, its patient and persistent use is absolutely curative.

### INTRA-UTERINE MEDICATION.

This is applied in the various forms of injections, pledgets, ointments, pessaries, crayons or pencils, capsules and powders.

### UTERINE INJECTIONS.

Prof. CARL SCHROEDER, of Berlin, recommends the following cautions in the use of uterine injections:

1. They should be avoided where there is marked tenderness or inflammation of the uterus or its appendages.
2. There must be a free exit of the injected fluid; hence it is better first to dilate, in every case, the uterine neck.
3. Only a small quantity of fluid must be injected.
4. The fluid should be slightly warmed, and slowly injected.
5. Where there is flexion of the uterus, it is advisable to draw the fluid back into the syringe after a minute or two.

Of substances used, probably the solutions of alum and iodine are the most useful, and these do not form precipitates with the albumen of the discharge, as iron, acetate of lead, nitrate of silver, etc.

The safety of uterine injections has been much debated of late years, and is doubted by Drs. T. G. THOMAS and PAUL F. MUNDÉ, of New York, and others; but the tendency now is to consider them as without risk, if not too violent, and performed with all necessary precautions, especially that the internal os or

cervix *be fully dilated.* Nevertheless, it is true that the French writers (GALLARD, LEBLOND, GUICHARD, etc.,) reject this dilatation as not necessary.

A sense of heat, some pain, and a slight febrile movement, often follow an intra-uterine injection, and continue some hours. Should these symptoms not disappear, an anodyne poultice should be laid over the abdomen, and a moderate dose of opium or morphine be given.

*Contra-indications.* Any acute inflammation in or near the uterus is a *positive contra-indication* against the use of intra-uterine injections. Hence where there is cystitis, ovaritis, or perimetritis in an acute form, we must not have recourse to this means. It is also advised on similar grounds to avoid this form of medication during the menstrual epoch, and for a week before and after the period.

A marked uterine flexion is also held to be a contra-indication, inasmuch as the fallopian tubes may be so displaced and dilated that the fluid may easily find its way into the peritoneum, giving rise to serious results.

*Medicated Injections.* One of the most successful agents in intra-uterine medication is "Dr. CHURCHILL'S tincture of iodine." According to the formula given by that author in 1864, it is made as follows:

| | | | |
|---|---|---|---|
| 135. ℞. | Iodinii, | gr. lxxv. | |
| | Potassi iodidi, | ℥ iss. | |
| | Alcoholis, | ℥ j. | M. |

This is used with great advantage as a stimulant, alterative, counter-irritant, caustic, and hemostatic. It has been very extensively employed in the New York State Women's Hospital. The internal os is thoroughly dilated, and the instrument used for injection is an ordinary hard rubber uterine syringe. The patient is strictly enjoined to keep her bed for a week after the injection. In chronic endometral disease, and after the removal of fibroids, etc., its action is exceedingly beneficial.

Dr. E. J. TILT considers *iodine* the safest agent to inject into

the uterus. He recommends the employment of a one-ounce india-rubber bottle with a pointed nozzle, fitting tightly into the end of a female catheter. The principal formulas he employs are:

136. ℞. Tincturæ iodinii,
Aquæ destillatæ, āā f.ʒj. M.

137. ℞. Liquoris ferri subsulphatis, f.ʒv.
Aquæ destillatæ, f.ʒiv. M.

138. ℞. Ferri perchloridi, ʒij.
Sodii bicarbonatis, gr. x.
Aquæ destillatæ, f.ʒiv. M.

139. ℞. Acidi chromici. ʒij.
Aquæ destillatæ, f.ʒj. M.

As a vehicle, glycerine is preferred by some, as it flows more slowly, and thus exerts the action of the agent for a longer time upon the uterine walls. As it is somewhat harsh when applied pure, it should be diluted. Oil of sweet almonds may also be employed. Dr. LIEBMAN uses:

140. ℞. Tincturæ ferri perchloridi, 1 part.
Glycerinæ, 10 parts. M.

*Nitrate of silver* should not be used for intra-uterine injections, as even in weak solutions it gives rise to violent uterine colics, often of long duration.

The Swedes favor the *sulphate of copper*. Dr. ECKLAND, of Sweden, states that in the severer cases with ulcerations, hypertrophy and neoplasms of the papillæ, the best agent is sulphate of copper, with which, in dilute form, (1–5 to 1–50), this author has had extensive experience, applying it by means of an applicator to the entire interior of the uterus, it being very efficacious, without being followed by any inconvenience, such as erosion of the mucous membrane, which is produced by some of the other agents employed.

Prof. JAMES P. WHITE, M. D., of Buffalo, in catarrhal metritis, prefers the following as a local application:

| | | | |
|---|---|---|---|
| 141. ℞. | Iodinii, | | ʒi. |
| | Potassii iodidi, | | ʒss. |
| | Acidi tannici, | | ʒj. |
| | Glycerinæ, | | q. s. to dissolve. |

Dr. W. W. WILKENS, of New Hampshire (*Half-Yearly Compend.*, 1876,) speaks very favorably of the following:

| | | | |
|---|---|---|---|
| 142. ℞. | Acidi carbolici crystal., | | |
| | Aquæ. | | q. s. to dissolve. |
| | Glycerinæ, | āā | equal parts. M. |

This mixture will not cauterize or destroy tissue. It may be applied to a mucous membrane without inflaming it; but it will stimulate to healthy action one already inflamed. It should be applied to the entire mucous membrane of the womb every week or ten days. As a rule, no pain follows its use, and it never causes metritis or has other dangerous sequelæ.

"Lugol's solution" of iodine in a concentrated form has been found efficacious by Dr. JOSEPH KAMMERER. His formula is:

| | | | |
|---|---|---|---|
| 143. ℞. | Iodinii, | 1 part. | |
| | Potassii iodidi, | 2 parts. | |
| | Aquæ, | 4 parts. | M. |

Its use is chiefly indicated where catarrh of the uterus is combined with hypertrophy of tissue.

Where the surface is eroded, with a tendency to hemorrhage, the same practitioner employs pyroligneous acid in its undiluted form, or else carbolic acid dissolved in an equal part of water. In those cases of hypersecretion where no erosions are visible, the following is a valuable astringent:

| | | | |
|---|---|---|---|
| 144. ℞. | Zinci sulphatis, | gr. x. | |
| | Aquæ, | f.ʒj. | M. |

### DR. J. R. CHADWICK, OF BOSTON,

Recommends the following method of intra-uterine injection, which is safe, and its general adoption might prevent many of the accidents now reported: Dr. CHADWICK says: "Injections into the vagina should be made with the patient lying upon her

side until the fluid begins to ocze from the vulva; the patient is then gradually turned upon her face while the injection into the vagina is continued; by this plan the vagina is distended to its utmost, as in the knee and elbow position, while the uterus gravitates into the abdominal cavity and allows the fluid to flow through the patulous cervical canal into the cavity of the organ with the force of pneumatic pressure. Any air thus forced into the vagina by the syringe will remain in the vagina, and thus the possible danger of its passage into the uterine sinuses be avoided."

### PLEDGETS (PINCEAUX.)

These are small masses of cotton, charpie, sponge, or other soft and porous substance, which are moistened with the medicated fluid and applied to the inner wall of the uterus. They are inserted by means of various instruments, as the "applicator" of Dr. H. E. WOODBURY, of Washington, or that devised by BARNES.

The liquids used in this manner are *tincture of iodine, perchloride of iron*, solutions of *nitrate of silver, nitric acid, iodoform, etc.* The last-mentioned agent especially has given excellent results in the hands of a large number of practitioners, in the treatment of chronic endometritis. The slight pain which it produces and the rapidity of its effects make good its claim to be the most valuable of all applications in many cases of this malady

The use of such pledgets is preferable to other means in the lighter forms of endometritis, where there is little or no hemorrhage, where the intra-uterine area is small, dilatation slight or absent, and the canal not tortuous. They should not be employed when inflammation is active.

### CRAYONS OR PENCILS.

These are inserted into the uterine cavity and allowed to remain, the cervical canal being stopped by a plug of cotton. For example:

145. ℞. Iodoformi, ʒ ijss.
Pulv. acaciæ,
Mucilaginis, q. s. M.
Divide into ten equal cylinders about one and a-half inches long.

These pencils are hard, resisting, and capable of being divided into pieces of any length; they should be preserved from light. They are used with advantage against superficial ulcerations of the uterus. They are introduced into the cavity and allowed to remain.

*Nitrate of silver* has been largely used in this manner. RECAMIER introduced the solid nitrate into the body of the womb by means of Lallemand's porte caustique. Dr. TILT prefers the porte caustique of Simpson, and leaves gr. v.–x. of the lunar stick to dissolve, provided the os be fully dilated.

Prof. PAJOT, (*Annales de Gynécologie*, 1877, No. 21,) takes a laminaria tent two millimetres in diameter, dips it in thick mucilage, and then rolls it in finely powdered fused nitrate of silver, and allows it to dry. He thus obtains an elastic crayon of the ordinary size, which may be introduced into the uterus without fear of breaking. He believes this means to be applicable to other cavities, and for other more powerful caustics.

The *sulphate of zinc* is also prepared in the form of crayons, twelve to fifteen centigrammes of the salt in each, for introduction in this form into the uterus; it is recommended by LEBLOND, and is considered by BARNES one of the most useful agents in uterine catarrh. (See page 130.)

Crayons of *tannin* have been used by some, but on account of their tendency to produce severe uterine colic and other accidents, they are not to be recommended.

## OINTMENTS AND GLYCEROLES.

Dr. ROBERT BARNES remarks (*British Medical Journal*, January, 1873,) that a most precious way of applying almost any medicinal agent to the interior of the uterus is in the form of an ointment or *plasma*. They can be introduced bv means of a

hollow sound, with a piston working in its centre, the "ointment positor." Where grease is objectionable, glycerine, cocoa butter, cosmoline, vaseline, etc., may be used. Thus bromine, iodine, mercury, etc., can be safely applied.

In simple chronic endometritis, Dr. A. LEBLOND (*Traité de Chirurgie Gynécologique*, 1878,) has employed the following with excellent effect:

| | | | | |
|---|---|---|---|---|
| 146. ℞. | Cerati simplicis, | | 20 grammes. | |
| | Pulveris iodoformi, | | | |
| | Olei amygdal. dulc., | āā | 5 grammes. | M. |

In cold weather, the amount of oil should be increased.

Glyceroles of starch, tannin, and other substances, may also be employed.

| | | | |
|---|---|---|---|
| 147. ℞. | Iodoformi, | 1 part. | |
| | Glycerinæ, | 10 parts. | |
| | Olei menth. piper., | q. s. | M. |

The above glycerole of iodoform has been extensively used by Dr. E. H. KISCH. (SCHMIDT'S *Jahrbücher*, Bd. 184.) He states that it actually stimulates the resorption of exsudates, alters favorably the secretion of the mucous membranes, and materially reduces excessive sensibility. The principal uses of it are in chronic metritis, chronic endometritis, and in old inflammatory conditions of the pelvic peritoneum and cellular tissue. A piece of wadding is wet with the above solution, and inserted in the evening, up to and against the vaginal portion of the cervix, where it is allowed to remain till morning, when it is withdrawn. In addition to this, it may be rubbed into the inguinal and hypogastric regions.

### CAPSULES.

The introduction into the uterine cavity of various medical substances enclosed in capsules has been suggested by Dr. E. P. SALE, of Aberdeen, Miss. (*American Practitioner*, June, 1875.) They may be made of gelatine, and introduced in the same manner as pledgets.

### POWDERS.

The insufflation of powders of alum, tannin, calomel, iodoform, etc., into the uterine cavity has been practiced by Prof. N. GUENEAU DE MUSSY and others. Several serious accidents have, however, resulted with most of these agents in this form, and except, perhaps, in the case of iodoform, there is no advantage, and an absence of safety in this plan of medication.

### PESSARIES, OR INTRA-UTERINE TENTS.

These are usually of cotton, saturated with some medicated fluid, allowed to dry, and introduced by a probe or a positor. The internal os generally requires to be dilated before this can be done. A thread may be attached to the tent, by which it may be withdrawn after a few hours; or, it may be allowed to remain until thrown off by the action of the uterus, which usually occurs within forty-eight hours (BATTEY.)

### RÉSUMÉ OF REMEDIES.

***Acidum Carbolicum*** is used as a local application by PLAYFAIR. (P. 125).

***Acidum Chromicum*** is advocated as a cauterant by Dr. TILT (P. 139.) Its application to the uterus sometimes produces the most severe vomiting, hence it is not very safe (TAIT.)

***Acidum Nitricum*** is one of the most efficient local caustics in many cases. For introduction into the uterus it is probably the safest of the fluid caustics. (See page 123.) The following method of using it is recommended by Dr. D. N. KINSMAN, as possessing advantages over any other (*Obstetric Gazette*, Nov., 1878): A piece of white wax smoothed down to the requisite size to enter the cervical cavity and given the proper curve, is dipped into the acid; a sufficient quantity adheres for the purpose to which it is to be applied. The wax bougie is grasped with a pair of dressing forceps and passed into the cervix; applied in this man-

ner there is no excess of acid to run over adjacent parts, while there is enough to act as a caustic or alterant.

*Argenti Nitras* is preferred as a caustic by many physicians.

*Belladonna*, internally, is recommended. (F. 120.)

*Boracicum Acidum* has been suggested as a useful agent.

*Cupri Sulphas* is used in Europe.

*Ferrum.* The preparations of iron are used internally as tonics, and the tincture of the chloride locally. (F. 140.) TAIT warns against iron in any form in chronic metritis. (See p. 132.)

*Iodinium* in several forms is in use by nearly all practitioners (F. 136, 141.) In the treatment of parenchymatous metritis, M. GALLARD gives iodine internally in almost every case—in quantities of from six to twelve drops of the tincture in mucilage, for eight or ten days every month, beginning, by preference, at the time when a menstrual flow ought to take place, for it succeeds best, he says, in cases accompanied with dysmenorrhœa or amenorrhœa.

*Iodoformum*, although disagreeable to most patients, has been found an excellent application. (F. 145.)

*Tannicum Acidum* is an astringent of great value.

*Veratria*, in the form of ointment, is an efficient local anodyne. (F. 122.)

*Zinci Sulphas* was applied in undiluted form to morbid uterine tissues by SIMPSON. Others have preferred it more or less diluted and made into sticks.

## EXTERNAL MEASURES.

*Blisters* are highly commended by Dr. ATTHILL, (P. 123.) Dr. R. PARK (*Glasgow Med. Jour.*, Oct., 1880,) says that the most effectual way of treating chronic metritis is to apply blisters about the size of a crown piece to each iliac region alternately.

*Massage of the Uterus.* This has been recommended in uterine atrophy, chronic metritis, and chronic uterine catarrh, by Prof. G. ASP, of Helsingford, (SCHMIDT'S *Jahrbücher*, Bd. 181,) and others. The proceeding, as

stated by this writer, is as follows: The operator, with one or two fingers in the vagina, grasps the body of the uterus so that he can exert upon it a steady pressure, while the counter-pressure is exerted by the other hand through the walls of the lower abdomen. If these walls are sufficiently loose and enlarged, by this procedure the uterus can be held between the fingers of the two hands, and gently pressed and kneaded. When the organ is displaced, it is usually necessary to correct the displacement before this method can be effectually used.

The kind of cases, according to Dr. A. R. JACKSON, of Chicago, in which it may prove useful is the following: When the uterus is low down, large, tender, spongy, doughy, etc.; this condition is usually associated with hyperæmia, and *massage* would be expedient unless contra-indicated by other circumstances. After the stage of hyperæmia has passed, and that of induration has been reached, the uterus is still low in the pelvis, displaced and distorted usually, but the spongy feel has passed away, and *massage* will be found to be almost useless.

There are three modes of performing the massage: 1, through the abdominal walls; 2, through the abdominal walls and the vagina; 3, through the abdominal walls and the rectum. The first is applicable in cases in which the vagina is small or unusually tender. The patient is placed upon her back, and at first the skin and superficial tissues are subjected, by means of the fingers, to alternate pinching and rubbing. After a few days the fingers can be depressed among the tissues so as to reach the uterus, which can be alternately squeezed and rubbed for from fifteen to thirty minutes in the gentlest manner possible. The preliminary manipulation is advisable in all cases; in some it is absolutely necessary.

In cases in which the uterus has not risen above the brim of the pelvis, the abdomino-vaginal method may be employed, with one or two fingers in the vagina and those of the opposite hand in the hypogastric region. The last method is the least available, and must be limited to a small class of exceptional cases; such as those in which the vagina is so small or tender as to make it impossible to adopt the second method.

# CERVIATIS (ULCERATION AND GRANULATION OF THE OS.)

ROBERT ELLIS, M. D., OF LONDON.

This author defines as follows the varieties of ulceration of the os, and what he considers the very best methods of treating them.

1. *Indolent Ulcer.* Cervix hypertrophied, of a pale pink color, and hard. Os patulous to a small extent. Ulcer of a rose red. Granulations large, flat, insensitive, and the edge of the ulcer sharply defined. Discharge: mucus, with a little pus, and occasionally a drop of blood.

*Treatment.* For a few times the caustic pencil—solid nitrate of silver. Afterward, the solution of nitrate of silver in strong nitric acid.

2. *Inflamed Ulcer.* Cervix tender, hard, a little hypertrophied, hot and red. Vagina hot and tender. Ulcer of a vivid red. Granulations small and bleeding. A livid red border around the ulcer. Discharge: a muco-pus, yellow and viscid, with frequently a drop of bright-red blood entangled in it.

*Treatment.* Occasional leeching, hip-bath (warm), emollient injections. Then acid nitrate of mercury several times, succeeded by the solid lunar caustic, potassa fusa, or cum calce.

3. *Fungous Ulcer.* Cervix soft, large, spongy to the touch. Os wide open, so as to admit the finger. Ulcer large, pale, studded with large and friable granulations. Discharge: glairy, brownish mucus, frequently deeply tinged with blood.

*Treatment.* At first, the caustic pencil. Subsequently, nitric acid, solution of nitrate of silver, or acid nitrate of mercury; electric, or actual cautery.

4. *Senile Ulcer.* Cervix small, red, a little hard. Ulcer small, extremely sensitive, of a bright-red color. Granulations very small, red, and irritable. Discharge: a thin muco-pus.

*Treatment.* Potassa fusa, or strong nitric acid, with nitrate of

silver once or twice at long intervals. The solid sulphate of copper, in pencil.

5. *Diphteritic Ulcer.* Cervix of ordinary size, a little hot, dry, and tender. Ulcer covered in patches with a white membrane, adhering closely, irritable, and readily bleeding beneath. Discharge: a thin acrid mucus, without pus, but occasionally tinged with blood.

*Treatment.* At first, electric cautery, potassa cum calce, or acid nitrate of mercury, two or three times at long intervals. *No nitrate of silver.* Subsequently, stimulating applications, tincture of iodine, or sulphate of copper.

### DR. A. LEBLOND, OF PARIS.

This writer states that (*Traité Elementaire de Chirurgie Gynécologique*, Paris, 1878,) the treatment of the os and cervix by means of cauterizing agents is so prominent that it deserves to fix our attention. The caustics employed are directed (1) to the surface of the os and cervix, or (2) to the parenchyma. They have also been classified as (1) mild, and (2) energetic caustics.

In follicular ulceration of the surface of the os and cervix, a strong solution of *nitrate of silver* gives excellent results. The application produces a slight eschar, which is detached in five or six days, after which it may or may not be renewed.

When the ulcerated surface is red and softened with tumefaction of the cervix, the *tincture of iodine* is to be preferred on account of its resolvent properties; or, what in some respects is better, *iodoform*, which is at once an energetic cicatrizant and a local anæsthetic.

Bleeding ulcerations, with a varicose aspect, will be happily modified by a solution of *perchloride of iron at* 30°. It should be repeated at the close of five or six days.

Obstinate ulcerations will sometimes yield in a satisfactory manner by application of a solution of *hydrate of chloral.*

148. ℞. Chloral hydratis, 2 grammes.
Aquæ, 25 grammes.

The ulceration to be touched daily with this for some time.

When the ulcerations are swollen and fungous, a more potent caustic than those above mentioned is required. SCANZONI used *pyroligeneous acid;* Dr. GALLARD, *crystallized acetic acid,* or *carbolic acid.* The first mentioned is the least painful.

*Pencils* or *crayons* of nitrate of silver, sulphate of zinc, perchloride of iron, iodoform, or other substances, may often be advantageously employed. Those of tannin are to be prepared as follows:

149 ℞. Tannin, 1 gramme.
Pure glycerine, q. s.
Rub together and roll into two crayons each five centimetres in length.

The most suitable formula for crayons of the other ingredients mentioned is the following:

150. ℞. Sulphate of zinc (or other agent),
Gelatine, āā 2½ grammes.
Pure glycerine, gtt. v.
To make ten crayons of six centimetres each. Powder the gelatine and place in a capsule in a sand-bath. Add the glycerine and ten drops of water. Stir till melted and smooth. Add the zinc or other agent with a few drops of water if necessary. Mix carefully, then cool and mould rapidly into pencils.

In certain cases where there is simply morbid enlargement of the os (as sometimes in chronic metritis) without ulceration, this engorgement may often be reduced by inserting some *iodide of potassium* enclosed in a tampon of wadding. Placed in contact with the neck, this substance generally produces a slight ulceration which rapidly heals, and is followed by a diminution of the organ. After eight or ten days, it may be repeated.

In cases of vegetations and rebellious ulcerations, more potent agents are required. Of these *chromic acid* is ranked by some as one of the best. It produces a dry, yellowish eschar. The crystals are used, being applied directly against the part, until the whole of it is covered with the eschar. It is not uncommon for this application to be followed by vomiting and diarrhœa, and precautions must be taken that as little of it as possible be absorbed into the system.

*Caustic potassa, Canquoin's paste, Vienna paste,* and *Filhos' caustic,* are other powerful caustics occasionally applied. They should be used with great caution. Dr. FILHOS' caustic is a solid form of Vienna paste, and is more manageable than it. *Nitric acid* is convenient of application, and has furnished good results. The *acid nitrate of mercury* is apt to extend beyond the deceased structures, and it is said to leave troublesome cicatrices. It has, however, been especially recommended in syphilitic ulcerations of the os.

In that form of cervicitis accompanying chronic metritis, where the cervix is enlarged, infiltrated, softened, and generally more or less ulcerated, as well as in a later stage of the same morbid process, when the cervix is enlarged, thick and hardened, the *actual cautery* will usually furnish the best results. This may be applied as the hot iron, the thermo-cautery, the galvano-cautery, the gas-cautery, or the cauterizing pencils. The application of the red-hot iron is not at all painful. It is followed by an eschar which is detached after eight or ten days, leaving a healthy granulating surface, and is not followed by a contracting cicatrix. The iron should be nearly at a white heat in order to prevent the adherence of the tissues which takes place when it is at a dull red.

Of the other methods of cautery mentioned, the *cauterizing pencils* of M. BONNAFOND may be described. They are little cylinders made of powdered charcoal and nitre, as follows:

| | | | |
|---|---|---|---|
| 151. ℞. | Nitrate of potassa, | 2 grammes. | |
| | Powdered wood charcoal, | 30 " | |
| | Gum tragacanth, | 10 " | M. |

Or, as follows:

| | | | |
|---|---|---|---|
| 152. ℞. | Nitrate of silver, | 1 gramme. | |
| | Wood charcoal, | 28 " | |
| | Powdered acacia, | 4 " | |
| | Water, | q. s. | M. |

They are lighted at a candle and applied to the part; but as

they are at once extinguished by the application, they are suitable only when superficial eschars are desired.

Cauterization by *ignipuncture* has been advised in this form of cervicitis when very rebellious. Filiform cauteries are used, and are inserted into the tissues to the depth of four to eight millimetres. Four to six punctures are made, distributed over the lips of the os.

After the cautery has been applied, the vagina should be washed with cold water, and the patient keep her bed for the rest of the day.

### DR. T. GAILLARD THOMAS, NEW YORK.

The cardinal point is to look upon the ulcer as a local manifestation of diseased action in the cervix or body, which is the lesion to be treated. The ulcer is a symptom of a graver and more important morbid state, which must be kept in view. It often happens that one symptom of a disease so distresses the patient that the remedy must be addressed solely to it; as when the ulcer by its profuse discharge calls for prompt relief. When the ulceration results from inflammation confined to that part of the cervical tissue immediately underlying it, the relief of the ulcer by the alterative and counter-irritant action of the means adopted, may effect the cure of the disease producing it, and the fact of the existence of such disease may not be recognized. "But when it depends upon the irritation of the discharges from the cavity of the cervix or the body of the uterus, or upon deep-seated areolar hyperplasia, cure is more difficult."

Caustics will be quite sufficient for ordinary granular degeneration, but when there are exuberant development of villi, so-called cock's-comb granulations, it is well to snip these growths closely by a pair of long-handled scissors, or even to scrape them off smoothly with a currette, and then apply the caustic. Of these, Richardson's *styptic colloid* is excellent. It is a direct alterative, and forms a protecting crust over the ulcer.

Where there is eversion of the cervix, the hemorrhoidal mem-

brane may be removed as above, and the actual cautery, or the nitrate of silver applied. An excellent method of cauterizing these ulcers is the gas jet cautery of ACOSTA, of Paris. An ordinary rubber bag is filled with carburetted hydrogen from the gas jet; a blow-pipe is fitted to the end of a tube attached to the bag, the escape of the gas being prevented by pinching the tube. The bag is compressed, the gas ignited, and the tiny flame is applied through the speculum to the spot.

After such treatment the patient is to be kept in bed, and the parts copiously irrigated two or three times a day; glycerine, laudanum, or infusion of bran or linseed, may be used. In a week or ten days, according to the potency of the caustic, the slough has separated. If the surface appears healthy, the milder alteratives are to be employed, as a pledget of cotton, saturated with equal parts of glycerine and solution of subsulphate of iron, or glycerine f. 3 vj. and tannic acid f. 3 ij. In addition, the patient should inject each night and morning a gallon of warm water, containing an ounce of glycerine and a drachm of sulphate of zinc; or two drachms of sulphate of alum, acetate of lead, or tannin, for ten or twenty minutes. Medicated suppositories may be used, of zinc oxide; or sulphate of alum, gr. iij.; or ung. hydrarg., gr. x.; or plumbi iodidi, gr. v.; or acid. tannic., gr. ij. And, as an anodyne, may be added to either of these: ext. belladonæ, gr. j.; or pulv. opii, gr. ss. These articles may be made into a mass with tragacanth, starch, slippery elm, and glycerine, and covered with cocoa butter.

When needed, the caustics may be repeated, but not too frequently—time should be allowed for the development of their stimulant effect; once a fortnight or even once a month.

In follicular ulcer, evacuate the cysts and cauterize their cavities thoroughly by nitrate of silver, chromic acid, or the acid nitrate of mercury.

### PROF. J. MATTHEWS DUNCAN, M. D.*

This teacher is of opinion that what is popularly called "ulceration" is properly *chronic catarrh of the cervix*. In many slight cases, the mistake is made of ordering too strong vaginal injections or lotions. The following is more appropriate:

153. ℞. Plumbi acetatis, ℥ ss.
Aquæ tepidæ, ℥ viij. M.
For an injection to be thrown up every night by the patient herself.

The same quantity of alum or zinc sulphate may be substituted for the lead. Cauterization by introducing the nitrate of silver into the cervix and turning it around is the ordinary, but not the most successful treatment.

In severe cases the best caustic is *zinc-alum*. Sticks of this, from one to one and a-half inches long, are made by fusing together equal parts of sulphate of zinc and sulphate of alum, and running the mixture into moulds the size of a No. 6 or 7 bougie. The cervix is exposed and a sound is passed to find if the passage is clear and to expose its direction. Then the stick of zinc alum is introduced and left in the vervix. A plug of cotton or lint is placed in the upper part of the vagina to keep the stick from coming out and to receive the caustic that dissolves. After three hours the plug is removed and the vagina well washed with tepid water. The caustic produces a yellowish-white slough, which after several days comes off, leaving in successful cases a surface which secretes healthy cervical mucus. This caustic is stronger than nitrate of silver.

In the severest cases still stronger caustics are required. The best is *caustic* potash applied so as to produce a slough in the thicker hypertrophied lip. Sometimes the actual cautery proves very efficacious.

It is advisable not to go on treating indefinitely an obstinate case of chronic catarrh. If after two or three trials, each of

* *Lectures on Diseases of Women*, 1880.

which may extend over several weeks, a cure is not effected, it is better to give up further meddling with the matter.

### DR. L. DE SINETY.

Ulcerations depending on metritis sometimes rapidly disappear under the influence of scarifications alone. Generally, however, topical treatment is necessary. In the choice of agents the phase of the disease is to be considered. During the congestive period nitrate of silver often acts injuriously. Dr. De Sinety prefers crystallized chromic acid diluted with an equal amount of water and used as follows: Carry the acid to the point to be cauterized on a little cotton fastened to the end of a small piece of wood. Take care that the quantity of the liquid is just sufficient not to flow beyond the space on which it is to act and immediately after applying it give a full injection of water to remove any that remains. Other useful agents are perchloride of iron, tincture of iodine, iodoform, tannin, alum, chloral and creosote, as in the following formulas:

154. ℞. Chloral hydratis, ℈j.
Aquæ, ℥j. M.
Touch the ulcerations daily with this.

155. ℞. Glycerinæ, ʒvj.
Alcoholis, ʒiij.
Creosoti, gtt. xv. M.

### DR. T. H. BUCKLER, OF BALTIMORE.

In that common form of enlargement of the vaginal portion of the uterus, with thickening, tumidity, redness, and often superficial ulceration of the lips surrounding the os tincæ, together with engorgement and enlargement of the muciparous follicles, just within the neck, and pouring out, as they always do in this condition, profuse secretion, or exudation, popularly called "whites" or *fluor albus*—this practitioner (*Monograph*, 1880,) never applies nitrate of silver, but has, times without number, carried a

large bougie up to the fundus of the uterus, allowing it to remain in the cervical canal twelve, sixteen, or twenty-four hours, and generally with more satisfactory results than from any other single expedient, topical or general. The relief is attributed to overcoming contraction in the fibres of the constrictor cervicis muscle, releasing the venous circulation, and thereby preventing retardation of blood and consequent engorgement. The original and continued cause having been removed by the bougie, he generally relieves existing engorgement by giving one or two Blancard's pills of iodide of iron after each meal; and when syrup of the iodide of iron can be had without free iodine in it the following may be substituted for the pills:

156. ℞. Syr. ferri iodidi, ℥ iiss.
Aquæ fol aurantii, ℥ iiiss. M.
Sig.—A teaspoonful after each meal, in water.

The muciparous follicles, he says, existing just within the os tincæ, and occupying the walls of the cervical canal for about an inch, are the sole and only sources of *fluor albus*. These follicles are often found enlarged and tumid, without other engorgement or trouble of any sort, in the tissues surrounding them. Signal relief is often derived from introducing a bougie and allowing it to remain a sufficient length of time in the cervical canal, thereby releasing the veins, and allowing their return circulation to pass through them unimpeded. The obstruction to venous flow being thus relieved, existing engorgement in the muciparous follicles may be resolved by giving the following:

157. ℞. Hypophosphit sodæ,
Hyp. phosphit. calcis, āā ℥ iij.
Hypophosphoric acid, q. s. ad sat.
Aquæ destillatæ, ℥ vi. M.
Sig.—Give a teaspoonful after each meal.

Pure phosphate of lime in the magma form is much better to prescribe in doses of ten grains, thrice daily, provided we can be sure of having it furnished in proper assimilable form by the apothecary.

DR. LOMBE ATTHILL, OF DUBLIN.

The first step in the more acute forms of inflammation of the cervix is to relieve the congestion by puncturing the cervix. The point of the knife should penetrate from one eighth to one-quarter of an inch. When the lining membrane of the cervix is extensively implicated, the next step is to apply strong nitric acid freely to the whole interior of the cervical canal. The acid is introduced on cotton wrapped around a platinum probe, and care must be exercised that it does not touch the walls of the vagina. This may be followed after a few days by the *glycerole of tannin*, applied in a similar manner; or the glycerole may be used instead of the acid.

168. ℞. Acidi tannici, gr. x.
Glycerinæ, f.℥j. M.

Thoroughly saturate a pledget of cotton with this, and then attaching a piece of string to facilitate its removal, introduce it up to the os uteri through the speculum, and leave it there for twenty-four hours. This is often productive of great benefit. If much irritation exists in the vagina, omit the tannin and use plain glycerine.

When the cervix is greatly engorged, œdematous, and covered with papillæ, sometimes the above procedures fail, and nothing promises relief but the total destruction of the diseased surface by *caustic potash*. Whenever this caustic is used, it should be applied through a glass speculum, and rubbed freely against the part; a pledget of cotton saturated in vinegar should be previously inserted between the lower lips of the os uteri and the edge of the speculum, so as to neutralize any of the potash which may escape; and the vagina should be washed out with vinegar immediately after the application. The patient should remain in bed several days. When much induration exists, the potash may have to be applied several times.

Milder applications are *nitrate of silver* and *tincture of iodine*.

The latter seems to allay the backache so much complained of in these affections.

### DR. W. C. DABNEY

Writes in the *American Journal of the Med. Sciences*, July, 1879, of the *topical use of ergot:*

"Although it is mentioned now in nearly all the works on gynecology, its value does not seem to be recognized by the majority of general practitioners. It appears to be especially applicable in *cervical metritis*. The manner in which it should be applied depends on the season of the year and the temperature. When the weather is sufficiently cool suppositories are preferable, but in warm weather it is difficult to handle them and keep them from melting. The addition of extract of belladonna increases the efficacy of the ergot, and also tends to relieve any pain which may be present. The following formula I have found serviceable:

"159. ℞. Ergotine (or solid extract of ergot), gr. xx.
Extract of belladonna, gr. ij.
Cocoa butter, q. s. M.

"Make into six suppositories, and insert into the vagina every night after using the hot douche.

"In warm weather a solution of ergotine and extract of belladonna in glycerine and water may be used in place of the suppositories, as in the following formula:

"160. ℞. Ergotine (or Squibb's solid extract,) ʒ ss.
Extract of belladonna, gr. vj.
Water and glycerine, āā f.ʒ iv. M.

"A pledget of cotton is to be saturated with this solution, and inserted into the vagina at bed-time after the hot douche. (The cotton should, of course, be removed in the morning.)

"It has been proposed to paint a solution of ergot on the os and cervix with a camel's-hair pencil, and favorable reports of this mode of treatment have been published. So far as my own

experience enables me to judge, those cases where there is a copious discharge of mucus or pus are much less amenable to treatment than others, and this is probably due to the fact that the medicine remains in contact with the diseased surface such a short time before it is washed off. And I would call attention just here to the advantages of glycerine over water as a *vehicle* when ergot is applied to mucous membranes where it is liable to be speedily washed off. The tenacious properties of glycerine keep the remedy longer in contact with the diseased surface, and in addition to this the glycerine itself is, as Dr. MARION SIMS long ago pointed out, of decided value in reducing some of these chronic inflammatory engorgements."

J. P. THOMAS, M. D., OF KENTUCKY.

This writer (*Richmond and Louisville Medical Journal*, Sept., 1879,) describes a medicated pessary, partaking of the emollient and soothing effects of a poultice, which he has used with success in erosions of the os and cervix uteri, and of neighboring parts of the vaginal surface. It is based on a formula of Dr. REZIN THOMPSON, and is as follows:

| | | | | |
|---|---|---|---|---|
| 161 | ℞ | Pulv. ulmi corticis, | 1 ℔. | |
| | | Pulv. ipecac. et opii, | ℥ iij | |
| | | Bismuthi subnitratis, | ʒ ij | |
| | | Pulv. sassafras rad. cort., | ℥ iv. | |
| | | Balsami copaibæ, | ʒ iv. | M. |

The powders are to be intimately mixed by passing them sufficiently often through a gauze sifter. The copaiba is to be thoroughly incorporated with the powder, and water gradually added until the mass, by constant working or kneading acquires the consistency of stiff dough; then roll into balls from one to two inches in diameter, according to the desired size or shape of the pessary. When the balls are perfectly round, place them on a smooth board in the sun, or if cloudy, under a stove, to partially dry. When they begin to feel hard, moisten them slightly and smooth and close any cracks that may have formed, and after

a few hours manipulate them into any form desired. Before introducing them they should be dipped in warm water.

The actual cautery, either the hot iron or charcoal pencils (F. 151), are also valuable aids in obstinate cases. *Iodized cotton* may be introduced into the cervix as recommended by Dr. GREENHALGH.

DR. KŒBERLE.

In the *Annales de la Société de Médecine de Gand*, M. KŒBERLE prefers *chromic acid* as a cauterizing agent to the other remedies usually used, as pernitrate of mercury, iodine, nitrate of silver, and the actual cautery. He uses it in the crystalloid condition. It is a very anhydrous substance, and readily absorbs the moisture from the tissues which it may touch. M. KŒBERLE applies it through an india-rubber speculum on a tampon of cotton wool. Vomiting often supervenes within fifteen or twenty minutes from the application of the acid. When the tissues are seriously altered, it is necessary to repeat the cauterization, but M. KŒBERLE has hitherto found three applications to suffice. After the application he applies a tampon, and advises the patient to use two soap-and-water injections daily. He treats all ulcerations of the os in this way, as in epithelioma.

DR. ROBERT BELL, OF GLASGOW.

This writer, in the *Lancet*, Aug. 10th, 1878, describes a very successful and simple mode of treatment of those cases of papillary ulceration of the cervix, in which, on examination, the vaginal mucous membrane is found to be turgid and red, and unduly sensitive to the touch. The vaginal portion of the uterus is hypertrophied, and around the os the finger detects a sponginess of the mucous membrane, and the lips are everted. On introducing the sound, hemorrhage to a small extent is induced. The uterine canal measures three inches. The speculum reveals a granular ulcer extending both outwardly and inwardly from the external os. This has evidently been due, in the first place,

to erosion of the papillæ, which, by continued irritation, has developed into this granular condition. The slightest touch causes it to bleed very freely.

The treatment commonly employed in such a case is the uterine douche night and morning, which the patient uses herself, while an application twice a week of a moderately strong solution of nitrate of silver is made by the physician.

Dr. BELL finds he can effect a cure in half of the time by another method. All the discharge is wiped away by means of cotton-wool, and then *pure tar* is applied to the diseased surface on a pledget of cotton. This is allowed to remain in contact with the ulcerated part for twenty-four hours at least, when the patient withdraws the cotton by means of a piece of string which has been left for the purpose. The application is made twice a week, and in from two weeks to a month the cure is complete. The tar is made fluid by the addition of one part of rectified spirits to eight parts of pure tar. This application has another great advantage besides its healing properties: it acts as an anodyne; and then a further benefit is derived from the support which the pledget of cotton-wool gives to the enlarged uterus.

### DR. ROBERTS, MANCHESTER, ENGLAND.

In *ulceration of the os*, this writer, while commending the *carbolic* application, does not consider the strong acid necessary in superficial ulceration. A mixture of one part of the strong acid with two of olive oil seems to answer all ordinary purposes; but in cases of very deep ulceration the use of the strong acid may be called for. In such cases, Dr. ROBERTS desires the acid to be liquefied by the addition of a very small quantity of water. This has not been found always to answer the purpose, but it has been noted that the addition of a *few grains of camphor* will dissolve the acid, and will, moreover, prevent it again becoming solidified, even at a freezing temperature. The application of the carbolic oil to the os uteri is best effected by soaking a little cotton-wool in the liquid, securing it by a string, and

introducing it through a speculum, the string being left depending out of the vagina, and the patient being directed to pull it away on the second day. This procedure is repeated in ordinary cases about twice every week. If it be desired to apply the acid to the cervical canal, it may readily be done by passing in a gum-elastic catheter smeared with the carbolic oil.

### DR. J. M. BENNETT, OF LIVERPOOL.

*Interstitial Injection.* In chronic cervical metritis (enlarged os, inflammatory enlargement and induration of the os,) this writer (*Lancet*, Nov. 2d, 1878,) has tried with gratifying results the *interstitial injection of iodine.*

He first prepares the patient both generally and locally; the latter by relieving any super-engorgement by means of local depletion, carried out by means of cupping, the frequent use of warm water, and the application of glycerine, so as to induce osmotic action, care being taken to avoid the period of menstrual excitement. He then uses a simple modification of the hypodermic syringe, which is sufficiently long to be used with Ferguson's speculum; its points are made of eighteen-carat gold; and the other portion, which might come in contact with the iodine, bromine, or other agent inimical to any metal less resistant than gold or platinum, is mercurially gilt. The instrument should be charged with a solution composed as follows:

| | | | | |
|---|---|---|---|---|
| 162. ℞. | Potassii iodidi, | | | |
| | Potassii bromidi, | āā | gr. x. | |
| | Tincturæ iodinii, | | f.ʒss. | |
| | Aquam destill., | ad | f.ʒij. | M. |

He then either punctures through the speculum, leaving the uterus free if the os and cervix be very large and low down, or fixes it with Sims' tenaculum, using a duck-bill speculum. He generally makes from three to five punctures, according to the amount of hyperplastic matter to be absorbed. A cotton pledget well soaked in glycerine is placed against the part, and rest enforced for at least twelve hours. Seldom more than three

operations are required; and he has never found any disturbance of moment set up, either generally or locally, by the procedure; ou the contrary, a number of cases turn out successfully when other methods have proved unavailing.

Internally he uses the *bromide of potassium* in large doses, both for the purpose of quieting excitement, and secondly of obtaining some of the benefits described by Prof. BINZ, of Bonn, who speaks of the potash salts as being positively specific in sub-involution; and he believes he has many times seen advantages derived from a continuous use of this salt, quite equal to those described by Dr. R. WILLIAMS, who attributed such wonderful powers to its action in splenic hypertrophy.

The above treatment can usually advantageously be joined to dilatation of the os by means of a sponge-tent, after the first effect of the injections has passed off.

*Richardson's Styptic Colloid.* According to Dr. R. E. BEACH, of Illinois, (*Illinois Medical Recorder*, August, 1878,) in granular conditions of the os, Richardson's styptic colloid painted over the os seems to produce good results. "It appears to act as a direct alterative, and by forming a protective crust over the surface, constitutes for it a shield against friction and uterine discharges, and by its constringing effects diminishes local congestion." (For the preparation of the styptic colloid, see NAPHEYS' *Surgical Therapeutics*, 7th ed.)

### DR. HALTON, OF DUBLIN.

In the *Dublin Journal of Medical Science*, June, 1876, Dr. HALTON gives a number of cases, explaining his plan of treatment, which consisted in producing local congestion by local means and touching the excoriated surface with the strong *nitric acid.* This was always carried into the cervix when that appeared diseased, and the acid brought in contact with the whole surface

of the canal, and even to the fundus if necessary.* It never gave rise to the slightest symptom of danger or distress, and in the vast majority of instances was altogether unfelt. When pain did occur, its amount was so trifling as to attract little notice from either the patient or physician. Astringent injections were found to be of little use, and whether this was from the patient's awkwardness in managing them or not, they have been latterly dispensed with by him, and their place supplied by the tannin, pessary, or bougie placed in contact with the os or introduced into the canal. The skin of the abdomen has been leeched or blistered, as seemed most suitable, over the tender spot in the region of the ovary, with very marked benefit. When much leucorrhœa was present, small blisters to the sacrum were found serviceable, while ergot and Indian hemp were useful internally, particularly when hemorrhage was present; but, undoubtedly, the most generally effective drugs were strychnine, in small doses, in combination with dilute nitric acid. The following is the formula used:

| | | |
|---|---|---|
| 163. ℞. | Liquor of strychnine, | f. ʒ iss. |
| | Dilute nitric acid, | f. ʒ ij. |
| | Tincture of gentian, | f. ʒ ss. |
| | Hoffman's solution, | f. ʒ iij. |
| | Water, | q. s. ʒ viij. M. |

The dose is one tablespoonful thrice daily, before meals. If pyrosis is present, a drachm and a half of sedative liquor of opium added to the above for a week or two, taking care to regulate the bowels with suitable aperients, will be found serviceable.

## MECHANICAL TREATMENT.

### T. GAILLARD THOMAS, M. D., NEW YORK.

When eversion of the cervical mucous membrane is the result of injury, as in parturition, an operation is necessary. The edges

* It is by no means necessary in all cases to dilate the os before touching the interior of the uterus with nitric acid. In many cases where this becomes necessary, the canal of the cervix is sufficiently patulous to admit the stillette covered with cotton-wool soaked in this agent.

of the fissure must be pared and approximated with deep sutures of silver wire.

A. J. C. SKENE, M. D., NEW YORK.*

Some preparatory treatment is generally required, before the operation can be performed. The cervix is usually found gaping, enlarged, eroded from pressure on the pelvic floor, and often in a state of cystic degeneration. In a bilateral laceration extending nearly, or quite, to the vaginal junction, the eversion of the parts is often so great as to require the removal of large portions of their surfaces before bringing them into apposition, or the tension on the sutures will be so strong as to cause them to cut into the tissues and prevent perfect union.

In these cases, about ten days before the final operation, bring the parts together, without any freshening of their surfaces, and confine them by means of a small piece of sheet lead on either side of the cervix, held in position by a silver suture passed continuously through both ends of the leads. Then tampon the vagina carefully with *marine lint*, which can be retained *in situ* for two or three days without becoming offensive, thereby protecting the surrounding parts from the chafing of the clamp. At the end of a week, remove the clamp. Three days later, operate.

The use of the marine lint tampon, above referred to, is, even without the clamp, of service in reducing the abnormal condition of the lacerated cervix.

He prefers the ordinary silk suture, as it cuts the tissue much less than silver wire. This is easily tied by using CARROLL'S *knot ties*, or by passing a loop of the THOMAS *curette*, and making traction laterally with that, holding the other thread firmly in the fingers. For after-treatment the less they are interfered with, the better. Remove the tampon in forty-eight hours, and do not use the vaginal injection unless absolutely requisite.

**Proceedings of Kings County Medical Society*, June, 1878.

## TENTS FOR DILATING THE CERVIX.

The use of tents of any kind is not without danger. Serious maladies and death have at various times resulted from their insertion. Dr. T. GAILLARD THOMAS gives the following rules with regard to their employment:

*Rule* 1. In the introduction of a tent, no force whatever should be employed. Should that first essayed not pass the os internum easily, it should be withdrawn and either bent so as to follow more accurately the course of the cervical canal, as ascertained by the probe, or exchanged for a smaller tent.

*Rule* 2. A tent should never, under any circumstances, be introduced at the physician's office, and the patient allowed to go home with it in utero. Such practice is hazardous in the extreme. Even when introduced at the patient's home, she should at once be confined to the bed.

*Rule* 3. The practitioner should always investigate as to the previous existence of chronic pelvic peritonitis, one of the most common of the diseases of women. Should it have existed, tents should be carefully avoided.

*Rule* 4. A tent should never be allowed to remain in the uterus more than twenty-four hours; and, if it be compatible with the accomplishment of the desired result, it should be removed in twelve hours.

*Rule* 5. After the removal of a tent, the vagina should be washed out with an antiseptic fluid, and if any pain, chilling or discomfort, follow the removal, opium should be freely administered and perfect rest enjoined.

*Rule* 6. After the removal of the tent, the patient should be kept in bed at least twenty-four hours, and never allowed to travel before the expiration of four or five days.

Dr. TILT lays stress on the importance of examining the patient with a speculum in full daylight, to be sure nothing is amiss with her pelvic organs. A tent should only be introduced every third or fourth day, and at some days removed from the menstrual epoch. If much irritation is produced, the dilatation

should be suspended. Vaginal injections should be used with great care at this time, as severe uterine colic may result from the fluid entering the dilated os.

Dr. BEVERLY COLE, of San Francisco, states that most of the sponge tents sold are carelessly prepared. Therefore he makes his own tents out of fine cup sponge, such as surgeons use. The sponge is dipped in melted wax, and then subjected to a very great pressure (which could best be secured by a letter-press) which forces all the superfluous wax out of the sponge, and flattens it out to a thin cake. It is necessary, in selecting the sponge employed, that it should be entirely free from all coral or other mineral impurities. After being pressed out in this way, the sponge can then be cut with the knife or scissors into any shape desired, care being taken to cut it in the direction of its long axis. In many instances it is very necessary to begin with a tent not larger than a knitting-needle. Before using, it should be provided with a thread by which it can be removed.

Dr. JAMES P. WHITE (*Trans. of the Amer. Gyn. Soc.*, 1880,) insists very strenuously that the twine or wire used to withdraw a sponge tent should run quite to the small or internal end, and should be securely fastened thereto; otherwise the tent is liable to part in the middle, and the inner portion slip into the uterine cavity.

Professor B. S. SCHULTZE, of Jena, teaches that all forcible dilatation is dangerous on account of the open wounds it makes in the mucous membrane, from which septic poisoning may occur. He insists on the following precautions in dilating the uterus: The patient should be in SIMS' or the knee-and-elbow position. A catheter being passed into the vagina, it should be washed with five per cent. solution of carbolic. The dilating material should be disinfected before introduction. Tupelo or laminaria is the best material. Sponge tents should not be used, because in spite of every precaution the secretion becomes putrid, and its meshes penetrate and wound the mucous membrane, thus giving rise to two favorable conditions for infection. If sponge tents be used they should be made of disinfected sponges and

saturated with carbolic wax. SCHULTZE prefers the laminaria, because by dipping one into boiling water he disinfects it, and at the same time makes it capable of being bent to suit the angle of the uterus; it is then greased with carbolic oil and introduced. A carbolized glycerine tampon holds the laminaria in place; after six to eight hours the tent is removed; the uterine cavity is disinfected; then several laminariæ or tupelo are introduced, as before. The finger and every instrument which is passed into the uterus must be clean and well carbolized. The results of infection can be from the smallest parametritis to peritonitis, or death from septicæmia or pyæmia. The prevention of the presence of putrid matter and the avoidance of injury to the mucous membrane, either by introducing the laminariæ or shortly before, are the only ways we have to reduce the danger to a minimum. If we wound the mucous membrane with the sound or laminaria as shown by a slight flow of blood, it is better to wait twenty-four hours before we dilate. Should infection take place, the treatment is the same as in puerperium. SCHULTZE has dilated for diagnosis and operation one thousand cases with the above precautions; has no death and but five cases of parametritis, none of which were severe.

Dr. B. S. SCHULTZE, of Jena, (*Centralblatt für Gynækologie*, Nov. 7th, 1878,) uses sea-tangle tents with strict antiseptic precautions, and having succeeded without an accident in several hundred cases, believes that if his method is followed the usual contra-indications to dilatation of the cervix may be dispensed with. One principle of his procedure is the assumption that for safe dilatation the tangle tent must never come in contact with a raw wound surface. But, besides this, he takes the strictest antiseptic precautions that the conditions of the operation allow of. He first employs flexible copper sounds, of varying thickness, by which he ascertains the exact size and curvature of the cervical cavity. Having settled these points, a tangle tent, corresponding in thickness with the sound, which just passes the cervical cavity, is immersed for one or two minutes in boiling water, and being thus rendered flexible, the same curvature is

given to it as that of the sound, which has been previously adapted to the cavity of the uterus. On cooling, the tent retains the curvature thus communicated to it, and after steeping it in a $^{3}/_{100}$ solution of carbolic acid, it is introduced through a speculum, the cervix being meanwhile held down by an assistant with a hook or vulsellum. If a drop of blood is seen coming from the cervix during any of these processes, the operation is to be postponed for at least twenty-four hours. The patient is to be kept strictly at rest during the whole time that the tent is dilating, and the strictest care is to be taken in the removal of the distended tent that no injury is caused to the cervix. The vagina and cervical canal ought to be then carefully washed out with a $^{3}/_{100}$ solution of carbolic acid.

It is remarked by Dr. W. GOODELL, that the danger of inserting tents increases with each introduction. Hence the importance of dilating the canal with one or at most two introductions. When sponge or laminaria is used, the cervix should be irrigated every few hours with a strong solution of table salt or of chlorate of potassa.

## RÉSUMÉ OF REMEDIES.

### AGENTS APPLIED TO THE OS.

*Acetum.* For removing sanguinolent or albuminous discharges in cervicitis, Dr. JAMES P. WHITE (*Trans. of the Amer. Gyn. Soc.*, 1880), recommends common vinegar. It coagulates the albuminous secretion, is a good astringent, and does not discolor the surface to which it is applied. Dossils of cotton saturated with vinegar will be found exceedingly convenient.

*Acidum Acetum*, in crystals, is said to be but slightly painful and very efficient.

*Acidum Bichloraceticum* has been recommended by SCHMIDT and URNER. It is obtained by the action of chlorine on hydrated acetic acid under the influence of the solar rays.

*Acidum Carbolicum*, in crystals, is an efficient agent, and as it is

also a local anæsthetic, the pain is less prolonged than with the mineral acid. GALABIN considers it the most widely useful of all applications for the cervical canal. The vagina must be protected and well washed out after the application. It may be diluted with glycerine, 1 to 5 parts.

*Acidum Chromicum* is preferred by Dr. KŒBERLE for the reasons given. (P. 158.) It is also a favorite with some American practitioners. Dr. ATTHILL says it is more irritating than nitric acid.

*Acidum Nitricum* is preferred by A. COURTY and others to any other caustic. Dr. ATTHILL has especially advocated it in Great Britain.

*Acidum Pyroligneum* was used largely by SCANZONI and the Vienna school.

*Alumen*, in powder, or ointment, or strong solution, or as burnt alum, has been occasionally employed.

*Antimonii Chloridum* is an energetic caustic, but of uncertain action.

*Argenti Nitras* has long been the most popular of all caustic applications to the os uteri. Dr. TILT observes: "I have no hesitation in saying it is the most valuable of all the agents that enable us to cure inflammatory affections of the reproductive mucous membrane." His usual solution is gr. xl. to aquæ f. ℥j. He applies it every four or five days when the os is red and sensitive, as well as when ulceration is present.

*Bismuthi Subnitras.* Dr. A. COURTY (*Maladies de l'Uterus*, 1866,) considers this substance, insufflated upon the part, one of the most powerful modifiers of ulcerations of the os. It has also been very strongly recommended, made into a thick cream with glycerine, applied to ulcerations of the os. It may be conveniently introduced through a tube, and retained in place by a pledget of cotton.

*Creosotum* was formerly used, but carbolic acid has taken its place.

*Cupri Sulphas* is a favorite agent with the Swedish physicians. They claim it is curative, and not followed by troublesome sequelæ.

*Ferri Chloridi Tinctura.* For hemorrhage depending on a gran-

ular condition of the cervix, this is a valuable agent. It is best applied on a small roll of cotton saturated with it, another and larger roll wet with glycerine being placed outside it. (ATTHILL.) They should not be left over a few hours, or sloughing may ensue. ARAN applied to ulcers of the os the following glutinous compound:

164. ℞. Tinct. ferri chloridi ether.,
Collodion, āā equal parts. M.

***Ferri Subsulphas*** has been largely employed as a styptic, especially in the form of Monsell's solution.

***Hydrargyri Nitras.*** The acid nitrate of mercury is well spoken of by TILT and other practitioners. It must be applied with considerable care, so as to avoid injuring other parts, and a solution of bicarbonate of soda should be at hand to neutralize it. On the other hand, ATTHILL never employs it, and A. COURTY (*Maladies de l'Uterus*, 1866,) formally condemns it as difficult of management and liable to be followed by severe mercurial poisoning.

***Iodinium.*** In ulcers of the os, iodine is not so effective as nitrate of silver (TILT), but when the latter disagrees, tincture of iodine is the best application. To the simple tincture Dr. GOODELL prefers the saturated ethereal tincture.

***Iodoformum*** is a soothing and healing application, principally objectionable from its odor and the unpleasant taste it imparts. The odor may be largely *disguised* by combining with it double the quantity of balsam of Peru.

***Pix Liquida*** has been employed by BELL.

***Potassa Fusa.*** This is principally used in the form of *potassa fusa cum calce*, which is of two strengths, known respectively as,

FILHOS' caustic:

165. ℞. Potassæ fusæ, 1 part.
Calcis, 2 parts.
Melt together.

BENNETT'S caustic:

166. ℞. Potassæ fusæ, 2 parts.
Calcis, 1 part.
Melt together.

Dr. TILT says that in obstinate cases of unhealthy condition of the lining membrane of the cervix, in highly irritable ulceration of the cervix with soft hypertrophy, in pseudo-membranous ulceration of the neck, and to establish an issue on the healthy mucous membrane covering a hard hypertrophied cervix, these preparations are exceedingly useful. Dr. ATTHILL finds the caustic potash eminently useful in those cases where the os uteri is in a state of granular erosion.

*Potassii Iodidum* acts as a moderate caustic in certain cases. (See page 148.)

*Pyroligneum Acidum.* Crude pyroligneous acid has been recommended as a local application to erosions of the os by SCANZONI, VEIT and SCHRÖDER.

*Salicylicum Acidum.* The following combination is praised by Dr. HENROT, (*Union Méd.*, 1880):

167. ℞. Acidi salicylici,
Pulveris camphoræ, āā ʒiiss.
Mix, and add,
Alcoholis, gtt x.
Unguenti petrolei, ʒiiss.-v. M.

This is stimulating and slightly caustic, and acts well in durated ulcerations of the os.

*Tannicum Acidum* is frequently employed as a stimulating application. It may be made into a crayon by moistening with glycerine, rolling out, and drying.

*Zinci Chloridum.* This agent is a very painful one.

*Zinci Sulphas.* In the more chronic stages of cervical endometritis, solid points of fused sulphate of zinc have been introduced by Dr. BRAXTON HICKS, and are often useful, but are liable to cause considerable pain and irritation when any active hyperæmia is present.

### UTERINE TENTS.

*Althea.* The root of the marshmallow has been employed as a tent.

*Cloth.* Tents made of cloth were introduced in 1871, by Dr. V. H TALIAFERRO, of Georgia, (*Jour. Gyn. Soc., Boston, vol. V.,*) and have been advantageously employed.

*Corn-stalk Pith.* In the *Transactions* of the Medical Association of Georgia, 1878, Dr. W. T. GOLDSMITH urges many reasons for the use of this substance for tents. Take a joint of dried corn-stalk; strip it of its cuticle, and compress the pith, slowly and firmly, between the thumb and index-finger. By continued pressure, it is reduced to four or five times less than its original size. It has a dilating power equal to sea-tangle or sponge. The corn-stalk tent is of easy introduction. Its rigidity overcomes any slight resistance. Dr. GOLDSMITH has used this tent for the last seven years. He has not had a single accident from its use, although he has introduced the tents many hundreds of times. The advantages of this corn-stalk tent are that it dilates effectually, but not too rapidly. It is smooth, soft, and can be removed without force. It produces no lacerations, abrasions, or irritation of the mucous membrane. It can be medicated with any substance as easily as the sponge or cloth tent. It is of vegetable origin, and hence does not become putrid and poisonous to the patient, and it may be retained, non-compressed, for days without injurious results, if no pain occurs.

*Gentian Root.* French physicians have used this occasionally. It does well as a dilating agent.

*Ivory*, which has been softened by exposure to acids, is recommended by some. In twenty-four hours it swells to double its first size.

*Laminaria or Sea-Tangle.* This aquatic plant swells, when moistened, to three times its size when dry. It has the advantage over sponge that it contains no animal matter, and emits no fœtor. When perforated from end to end as recommended by Dr. GREENHALGH, such tents dilate rapidly and also allow the fluids of the uterine cavity to escape. They cause, however, much severer pain than sponge, and run a danger of tearing a resisting os. Mr. TAIT disapproves of them for these reasons.

*Slippery Elm Bark.* This substance is praised by Dr. WILLIAM

GOODELL as a material for tents. Though of less expansive power than laminaria or sponge, it may be left in longer, as it softens down, and becomes dissolved by the discharges. It is of especial value in cases requiring no very great dilatation, but a prolonged treatment, such as in flexions.

*Sponge.* This is the substance preferred by many for tents. Its expansive power is considerable and it is easily adjusted to the size and shape of the neck. But it produces a fœtor which is but partially overcome by treatment with carbolic acid and irrigation of the vagina. TAIT prefers sponge tents, impregnated with oil of cloves, but adds that even with these there is some risk of infection, and to secure entire immunity recommends that the tent be enclosed within an elastic capsule.

*Tupelo.* The root of the tupelo tree, *Nyssa multiflora*, has been advocated by Dr. G. E. SUSSDORF, of New York city. It is light, smooth, and its power of absorption is said to be greater than that of sea-tangle.

### OTHER MEASURES.

*Galvanism.* In ulcerated os with leucorrhœa, Dr. O. E. HERRICK, of Greenville, Michigan, writes to the *New York Medical Record*, 1879, extolling this line of treatment. He introduces a pessary made of a ring covered with rubber and supported by a Y-shaped support of twisted silver wire, held up by a perineal band. Outside, and held up by the waist-band, is a small plate of zinc, enclosed in a chamois-skin bag with a sponge moistened with vinegar. The zinc plate is united to the silver wire of the pessary by a copper wire, thus making a complete galvanic battery. In one patient, in thirty-six hours after the galvanic attachment was made, he found healthy granulations instead of the unhealthy ulcer; and the leucorrhœa had stopped almost entirely, which had not taken place for a year before. In one week, there was neither ulceration nor leucorrhœa; he then removed the copper wire and zinc, but left the uterine supporter a week longer. The patient was discharged cured, and remained so after the removal of the apparatus.

*Local Blood-letting.* Prof. J. Y. SIMPSON says frequently where there is engorgement or hypertrophy, the abstractirn of two or more ounces of blood greatly relieves the stress from which the patient is suffering, and aids in the beneficial results from other remedies. This may be effected by leeches applied to the cervix through the speculum, or by scarifying around the os with a tenotomy knife with a long stem. It is well to make the patient sit over a dish of hot water to favor the flow, and then apply a warm vaginal douche, taking care that the patient is not wetted and chilled during the process.

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# DISPLACEMENTS.

PROF. E. J. TILT, LONDON.

Displacements of the uterus would seldom require mechanical treatment if the congestion and other affections were properly treated. It is bad practice to employ mechanical measures prior to the cure of inflammatory lesions. This, by diminishing enlargement, will likewise relieve displacement. The stem pessary will not be borne, when the cervical mucous membrane is inflamed. When the displacement is congenital or of long standing, the cure of the inflammation does not correct it, but by a tonic treatment, with opium suppositories at night, astringent injections, and electricity, many are enabled to perform their household duties. Always make light of displacements to the patient, as otherwise fright interferes with the cure.

Retroversion and antervesion depending greatly upon relaxation of the vagina, astringent injections prove of value, as strong solutions of alum, sulphate of zinc, or tannin. Aid is obtained by suppositories containing alum, iron alum, tannin, or matico. A good plan is to enclose in cotton-wool a small lump of alum, the size of a hazel-nut, tie round it a string long enough to hang

... all as high as possible in ... is, the alum gradually dis- ... vaginal walls. Remove the ... freely to remove the coagu- ... ation. Cold vaginal douches ... day, for fifteen or twenty ... the patient is per-piring ... pains of displacements.

... rest for a few hours daily ... pain and congestion. ... seasons of disease, and ... sip-baths and large abdo- ... greatly modifies and ... They are then mechanically ... furnishes sounder tissues. ... keep the patient on her ... twice daily after the red ... ons, and continue them for

... es not follow constitutional ... be employed. The womb ... bandage with a vertebral ... the intestines. Prolapsus ... by the styptics as above. ... the womb cannot be re- ... by scarifications and lead ... ing it with strips of adhe- ... Then, with the patient in ... may force the womb back

... vulcanized rubber are often ... in size, till they can be ... give great relief, even ... ment.

... removed and cleansed.

... watch-spring is easy of in-

troduction, and tends to counteract the relaxation of the vaginal walls. A heavy prolapsed womb is well supported by Coxeter's gutta-percha pessary, which resembles a funnel, the mouth covered with thin vulcanized rubber on which the womb rests. This membrane is pierced with holes to permit the secretions to drain off freely. Another by Coxeter has a spring which distends a thin rubber cup which supports the womb; the lower end is fixed in the perinæal band, so that the patient can remove or draw it aside. Bourjeaud's mushroom pessary is made of vulcanized rubber, and may be inflated by a tube after it is placed. When distended, it is well calculated to support the neck of the womb in the depression in its upper part. It is secured by elastic bands fastened to an abdominal belt. It has two advantages—its size may be regulated, and it diminishes vaginal irritation.

In complete prolapsus, the tow-pessary may be employed. The vagina, after replacement, is packed with carded oakum, called "antiseptic marine lint," or with chloralum cotton-wool. The vagina is allowed a limited power of contraction, the pressure does not cause pain, and the pessary is not readily displaced, nor does it interfere with the functions of the surrounding organs. The plug should be replaced weekly, less being required each time. This is highly praised by Dr. COPEMAN, of Norwich, and Mr. MORGAN, of Litchfield.

Various plans have been proposed to narrow the vagina, and thus cause the womb to be retained.

Dr. MARION SIMS cuts off slips of mucous membrane at appropriate distances, and brings the cut surfaces together by silver sutures.

When old adhesions prevent the reposition of the womb, EDWARDS, of Denbigh, and others propose its removal. In three-fourths of these cases, the operation has been followed by recovery.

For uterine flexions, Dr. GOODELL, of Philadelphia, introduces into the cervix a powerful dilator and forcibly dilates it,

so as to crack the circular fibres. This is done under ether, and is claimed to be very successful.

### LOMBE ATTHILL, M. D., DUBLIN,

In retroflexion, believes that where a pessary can be borne, its action will aid the cure. He prefers Hodge's lever pessary with transverse bars; or Dr. Greenhalgh's spring pessary, which is made of copper wire bent like the Hodge pessary, cased in rubber tubing; but the wire is wanting at the lower or wide end, the tubing alone crossing there. A double advantage is that the tubing here adapts itself to the parts and does not irritate the neck of the bladder, and also it permits the sides to close during introduction. Great care is requisite in adjusting the pessary as to its size. When too large it causes pain; when too small it slips out. Stem pessaries are especially useful in dysmenorrhœa with retroflection. The best is Greenhalgh's flexible pessary; the stem is of rubber tubing, admitting an ordinary sound, which must be passed into it when being introduced. Near the upper extremity is a bulb with four slits in it, through which the secretions escape; the lower extremity terminates in a shield.

Stem pessaries should never be left in longer than a month, and should be avoided if possible.

Bear in mind that cases are often met with which seem to cause no distress, and should not be interfered with.

*Retroversion* is rare, and is generally connected with pregnancy, and usually occurs at the close of the third month, causing retention of urine; on emptying the bladder a globular body will be found occupying the hollow of the sacrum, while the os uteri is high up behind the pubes, and the fundus will be found absent from its proper place.

Two indications are to keep the bladder empty, and to restore the uterus to its normal position. In these cases always use a long gum catheter. If the attempt to restore the womb cause great pain, it is better to wait a few hours, and calm excitement

by a suppository of morphia. Place the patient on her side, or better in the genu-pectoral position, and with two fingers in the vagina press the fundus up laterally, so as to avoid the sacral promontory. In case this fails, introduce a Barnes rubber bag into the rectum, distend it with water, and at the same time make pressure with the fingers in the vagina. Should all such efforts fail, abortion must be induced or death will result. After the reduction has been accomplished, the patient must be kept at rest, the bladder carefully emptied at proper intervals, and if the uterus again tends to fall, this must be prevented by keeping her in the recumbent position.

*Anteflexion* is very common, and is generally the result of congestion, etc. Puncturing the cervix will alone often give marked relief. The fundus can be raised by means of the sound, and supported by the stem pessary.

*Prolapse of the uterus* must not be confounded with cystocele, with which it is often complicated. Absolute rest in the recumbent posture, even with the lower part of the couch elevated, is very useful, but after all, it is only palliative. Some support is required. The best is Hodge's pessary, a wide one with transverse bars. These bars prevent the anterior walls from prolapsing. Dr. GODSON, of St. Bartholomew's, has invented a pessary with vulcanite wings, which are movable. The wings are closed on introduction, and then expanded by bringing the metal feet together, where they are locked. This should be removed and replaced night and morning. In cases with large protrusion and greatly relaxed perinæum, operative means must be employed to narrow the vagina. SIMS removes a portion of the mucous membrane in the shape of a V from the anterior wall, the apex near the bladder, and the arms extending either side of the cervix. This opening is closed by means of wire sutures. In certain cases, it may be useful to repeat this procedure on the posterior wall.

Where the cervix is very long, relief may be obtained by its amputation by means of the écraseur.

*Inversion of the uterus* is rare, and generally occurs soon after delivery. In all cases, its reduction should be attempted by the taxis, under chloroform. Should this fail, continuous pressure exerted by a rubber bag in the vagina, inflated, and retained by a bandage will reduce it.

All failing, it should be amputated by means of the écraseur.

THOS. ADDIS EMMET, M. D., NEW YORK.

In all versions, correct the displacement by mechanical means, and relieve the local cause of disease. The latter should consist in the frequent and continued use of hot water injections, etc. This gives tone to the blood-vessels.

A retroverted uterus may be lifted into place by the use of the index-finger, and is the most reliable means we can employ. It is attended with the least risk, and we are able to appreciate at once, in case of adhesions, the point and extent of resistance. The patient is to be placed on her back, the knees flexed, the hips drawn down to the edge of the couch. The index-finger is introduced into the vagina, and the point of a tenaculum hooked into the posterior lip within the os. By this the organ is drawn toward the outlet so that the fundus may clear the promontory. This manipulation must be done with care, and if great pain is caused, it must be suspended. This manœuvre causes a still greater retroversion; to correct this, the perinæum is to be pressed firmly back, that the finger in the vagina may be passed up far behind the uterus so as to lift that organ. The fundus thus elevated, the cervix is to be suddenly carried in an arc of a circle, downward and backward by means of the tenaculum. The version completed, the fundus can by the finger be pressed up against the uteri-sacral ligaments. These gape as the tension is relaxed by carrying the cervix backward, and the fundus slips between them. The finger is to be quickly passed from the posterior cul-de-sac against the anterior lip, the tenaculum withdrawn

and the womb thrown forward by passing the finger repeatedly down the anterior face of the uterus, so as to press the cervix downward and backward into the hollow of the sacrum. This operation, especially when it has caused much pain, should be followed by a hot water injection, and a glycerine dressing in the vagina, and several hours' rest.

On the subject of PESSARIES this author says: In adjusting a pessary great regard should be paid to the shape and size of the vagina, as scarcely two women could be benefited by the same instrument. The object is to restore the uterus to its proper place, and thus completely establish the circulation. Raise the uterus gently on the tip of the finger, until the patient expresses a feeling of relief from all feeling of fullness and bearing down. This is to be the guide. The pessary is then to be fitted so as to maintain the womb at this point. When the instrument fits properly, and has corrected the malposition, the patient should be unconscious of its presence. The largest number of cases will be relieved by some modification of Hodge's closed lever pessary. All outside appliances should except in extreme cases, be avoided. The instrument should, remain unchanged for months, while the parts are recovering their tone. Block tin rings made of an alloy of tin and lead in such proportions as to be easily moulded, and yet unyielding enough for the pessary to keep its shape, make the best. The support for the instrument is to be taken from the bottom of the posterior cul-de-sac. Hard rubber may also be used for the same purpose. To receive the full benefit, the vaginal outlet should not be too large, and the posterior cul-de-sac should be of a natural depth. "The fulcrum of this double lever rests on the bottom of the cul-de-sac, and in front against the posterior wall of the vagina. It should be curved at one extremity with reference to the shape of the cul-de-sac and posterior wall, and bent at the other end in the opposite direction with a lesser curve, so that it will be balanced, as it were, in the vagina." When the patient stands, the weight of the uterus will be thrown on the short lever forming the long curve in the posterior cul-de-sac. This causes the other

end to rise and rest against the anterior wall of the vagina near the neck of the bladder. In the horizontal position, the weight is removed, and the long lever rests in the axis of the vagina. By thus adjusting itself, it cannot press so as to cut into the vaginal tissues.

The pubis should be avoided as the chief point of support, if possible; but this must be, when the anterior wall of the vagina is shortened by reason of an old retroversion, and where prolapse of the posterior wall occurs from perinæal laceration. An operation here becomes necessary. But for a temporary pessary, the only point of support is behind the symphysis. Under such circumstances, the instrument must be wider below, and with the greater curve at this end, that downward pressure may crowd the other extremity up behind the pubes. Here a depression must be made to receive the neck of the bladder. The general laws for all pessaries are, that the instrument shall be small enough to admit the finger between it and the vaginal wall at any point while the patient is on her back; it must be large enough to support the uterus, and yet allow the vagina to regain its normal size. To get the length for a pessary, the patient being on her back, pass a whalebone stick or any blunt instrument along the index finger into the posterior cul-de-sac, and measure from behind the pubes. Next, to get the proper curve. In retroversion, a longer curve is needed than when there is only a prolapse. Here the upper part of the vagina is more dilated than below, to which the instrument must conform, but not with so abrupt a curve as to press directly against the junction of the vagina, but beyond it, otherwise the circulation in the neck and womb is hindered, and engorgement and erosion follow.

Where there is thickening of the posterior wall and retroversion, the curve must be such that it will pass far beyond into the cul-de-sac. This extremity must be rounded gradually, and not be made too narrow for its length. In cases where the thickened edges of the ligaments are very sensitive, this must be removed by hot water injections, and the free application of iodine to the cul-de-sac every third or fourth day, and to take

off the pressure, the recumbent position should be maintained. To allow of exercise, temporary support may be given by a cotton pessary, shaped like a large mushroom, and placed in front of the cervix. This is made by pressing a square pledget of damp cotton between the hands, and folding the corners towards the centre until a ball is formed of the proper size; then holding the extremities between the fingers, a stem is made by wrapping cord between the ends and the ball portion. This saturated with glycerine, will readily support a prolapse.

When the cul-de-sac is absent or very small, a straight or flat pessary is used, fitted to receive support behind the symphysis, and put the vagina on the stretch so as to carry the uterine neck so far back as to make an anteversion. This must be watched lest it cut into the tissues. The shorter the vagina, the straighter must be the instrument, lest it rotate and remain across the axis of the canal. It must be wider in the middle than a curved one, in proportion to its length.

There is also a hollow rubber disk, which is useful in place of the cotton pessary where glycerine is not to be used. It is most useful where tenderness prevents the use of the ordinary form. To prevent pressure on the urethra or any tender point, a sulcus may be made by passing a small elastic band once or twice around its thickness. It may be placed in front or behind the uterus as occasion may demand. It prevents the sagging of the uterus in the pelvis. As rubber causes an offensive discharge by long retention, it is only temporary and should be removed at night, or when not needed, as in exercising.

Sponge must never be used as a pessary.

In *flexures* of the uterus, this author says as soon as the true condition is appreciated, the intra-uterine stem will be abandoned, as also the practice of dilating with steel sounds or sponge tents. The use of either is faulty in theory, without permanent benefit, and always dangerous. Where flexure is below the vaginal junction, surgical aid may be useful. The proper time is shortly after the menstruation, and the incision should be made backward. In flexures of the body of the

womb, hot water injections will give tone to the vessels. Iodine should be frequently applied to the canal by the applicator bent to a curve corresponding to the flexure. When the uterus is enlarged, and the cervix hard, the acetic solution of cantharides should be applied to the neck after each period, to produce a blister. This relieves the congestion and acts revulsively and also produces uterine contractions. Glycerine on cotton must be used daily, and ergot with tonics given internally. It must be continued for a long time and not in doses to cause irritation of the stomach or marked uterine pains. When absorption of tissue has left a permanent deformity, and there is no cellulitis, it is well to open the passage in order to prevent dysmenorrhœa. The posterior lip is to be divided backward, and a triangular portion raised and removed. Though occasionally successful, yet it often fails and there is a return to the old condition.

Where *procidentia* exists to such a degree that the pessary cannot retain it, a surgical procedure becomes necessary. The object is to reduce the size of the vagina, which is accomplished by taking in a plait.

In obstinate cases, this author anteverts the uterus with the finger as the patient lies on her back, and the neck of the womb is crowded into the posterior cul-de-sac by a sponge probang held by an assistant. He then seeks a point about half an inch to either side of the cervix and a little behind the line of the anterior lip, which two points can be drawn together in front of the uterus by a tenaculum in each hand. The surfaces are denuded and a similar surface in front of the uterus. A needle armed with a silk loop is passed beneath each freshened surface and they are brought together and held by a silver wire attached to the hoop; the folded surface is denuded below and the joints united by sutures.

### THOMAS EDIS, M. D., OF THE MIDDLESEX HOSPITAL, LONDON.

This writer observes that the genu-pectoral position proves of much service in all cases of retroversion and retroflexion, more

especially when metritis also exists. In a short time patients become accustomed to the posture, and will say that they can get more relief in one hour by resorting to this method than by lying down in the ordinary position for several consecutive hours. The uterus falls forward in the abdomen, pressure posteriorly being thus removed; the distressing pain in the back, frequently complained of in these cases, disappears within a short time. In many instances, where a Hodge's pessary cannot be tolerated under ordinary circumstances, by restoring to this position for a quarter of an hour occasionally during the day, the instrument can be worn with comfort. The genu-pectoral position, also, offers manifest advantages in the replacement of the retroverted gravid uterus; also in pressing the uterus up beyond the pelvic brim in cases of impacted fibroids. In cases of prolapsus and subinvolution, much may be gained by adopting this position. In the morning sickness of early pregnancy, and in cases of prolapse of the ovary, considerable relief may be thus obtained.

### DR. JOHN WILLIAMS, OF LONDON.

*Chronic inversion of the uterus* frequently demands surgical interference for its relief. In some cases, however, success may be achieved by the use of the repositor, or by *elastic pressure*. An instance of the successful employment of the latter is described by Dr. JOHN WILLIAMS, of London. (*Obstet. Journal*, April, 1879.) A cup of vulcanite mounted on a metallic stem, having a perineal curve was introduced. The cup was applied to the inverted fundus, and to the ring at the end of the stem were fastened four elastic bands, two of which were carried anteriorly between the thighs in front of the abdomen, and fastened by tapes to a broad strap of adhesive plaster placed round the waist; the other two elastic bands were carried posteriorly and fastened by similar means to the adhesive strap in such a manner as to cause the force exerted upon the fundus uteri to act, as far as could be judged, in the axis of the brim of the pelvis. There was some systemic and local reaction to the use of this apparatus, but after

the first day no pain was complained of, and in two days the uterus reverted to its normal position and the cup was withdrawn.

### PROF. MONTROSE A. PALLEN, M. D., OF NEW YORK.

In cases where there is so much tenderness of the uterus and vagina, that an ordinary pessary cannot be worn, this gynecologist is in the habit of daily reducing the version by placing the woman in the genu-pectoral position, and lifting the perinæum so that the vagina becomes ballooned and the uterus falls into the axis of the inlet, which is kept in position by introducing into the anterior and posterior arches of the vagina sufficient thymolized clay* to fill the upper third of the canal, the lower two-thirds being padded with soft cotton. This makes a perfect pessary-support, retaining the uterus, bladder, and rectum in normal relationship. Prior to the next visit of the physician, the patient removes the cotton, and washes out the thymolized clay, when the same process is undergone again. It is remarkable how rapidly some patients yield to this process of treatment. In many instances in pregnant women, it is necessary to continue this method of procedure until the uterus rises from the excavation, lest abortion ensue in consequence of jamming under the sacral promontory in retroversion, or cystitis develops, because of the constant hyperæmia engendered by superincumbent uterine pressure.

### DR. J. KIRKPATRICK, OF DUBLIN.

This writer (*Dublin Journal of Medical Science*, Feb., 1879,) lays down the following:

*Rules for the use of pessaries*, the strict observance of which, he states, will tend much to the safety and comfort of patients,

*See under *Pruritus of the Vagina* for the formula.

and prove the surest safeguard in preventing all the accidents arising from the use of pessaries:

1. In no case should a physician use a pessary without telling his patient that he has done so.

2. That inasmuch as a pessary should give rise to no pain or uneasiness whatever, after its introduction, the patient should immediately come back, in the event of any such symptom occurring.

3. She should return to have the instrument examined or removed, not later than six weeks or two months.

4. That, in the event of any sensation of heat, pruritus, or irritation of the vagina, or the occurrence of any discharge, colored or otherwise, or any offensive smell, she should at once present herself to the doctor for examination.

5. The daily use of a vaginal injection of tepid water, or of some mildly astringent wash, will have the most beneficial effect in arresting the first symptoms of vaginal irritation. If the patient be wearing a Hodge pessary, she should be warned to use gentleness in introducing the pipe of the syringe, lest the instrument might be displaced. A patient need not be afraid of using an injection of simple warm water, even during the menstrual flow. This conduces very much to her comfort at the time, and the retention of any of the catamenial fluid is very apt to prove a source of irritation.

6. If the vulva is much dilated from procidentia of the womb, it is well to keep the patient in the horizontal position for some days, whereby the womb will be kept up, and the vaginal orifice have time to contract before the introduction of the pessary, for, although the introduction of a disc or globe pessary may be accomplished with great facility, its removal afterwards may become a matter of great difficulty, owing to the contraction of the vaginal orifice, consequent upon the womb being kept *in situ*, and no longer distending the parts.

### HOSPITALS OF PARIS.

A local treatment of *prolapsus uteri* has been recommended by

some Parisian surgeons. (*La France Médicale*, July, 1879.) The surgeon takes pure tannic acid and makes a *concentrated* solution of it in water, *at the moment of using it.* A score of little balls of charpie are made, and are allowed to soak thoroughly in the solution. A brush (camel's-hair,) with a long handle, is to be in readiness. The woman being in a suitable position, a speculum is introduced into the vagina, which reduces the uterus, or the reduction may be effected before its introduction. The brush is then dipped in the tannic acid solution, and being carried through the speculum, the uterine neck and the whole internal surface of the vagina is several times freely bathed, the speculum being withdrawn little by little, but re-introduced afterwards to pack the balls of charpie soaked in tannin in the uterine culs-de-sac, by means of a long pair of dressing forceps. The culs-de-sac are thus firmly packed, and the speculum being gradually withdrawn, the whole cavity of the vaginal canal is filled with these same balls, and the vulva is closed by a charpie tampon, which is externally supported by a compress. Complete rest in bed is observed, and twenty-four hours after its application the charpie is gently withdrawn, pellet by pellet. Cold vaginal injections, composed of a strong decoction of dried oak bark, are then prescribed, to be used three times a day. Before each of these injections the womb should be restored to position. At the end of two or three days at most, this operation is repeated, and so on, increasing little by little the intervals between the applications of the dressings; and even after it is thought that a cure has been obtained, the injections alone should be continued for fifteen days or so.

The proceeding is very simple, inexpensive, applicable at all times and in all places, necessitating neither special apparatus nor substances difficult to procure, nor traumatism of the genital organs; it is entirely painless, very easy of application, even for the most inexperienced physician, and secures at the end of some months an absolute and veritable cure of uterine prolapse.

PROF. ELLERSLIE WALLACE, M. D., PHILADELPHIA,

Employs a curved sponge-tent, reinforced by a steel spring. The spring is introduced within the interior of the tent, and by its tendency to resume its original form after being bent in the reverse direction, acts to lift up the bent womb. The theory is not that of effacing the curve by dilatation, but the principle is that by the erection of the tent, by virtue of its elasticity, the curve of the uterus is effaced by the gentle, yet powerful action of the tent as a lifting force, which elevates the fundus of the uterus from its abnormal position. The first tent should be of small size and without a spring, because the bulk of the sponge would not be sufficient to hold the spring to its proper curve. In making these tents, the sponge should be elastic and moderately close-grained. A cylinder, free from large cavities, is to be cut from it, corresponding in length to the uterine cavity, and having in its long axis a gentle curve, similar to the natural bend in the womb. This cylinder is to be a little thicker than the thumb, but may vary in proportion to the effect desired. Wash it well, and trim it smoothly. Next, make an opening in the centre from one end almost to the other, and pass into this a piece of watch-spring half an inch shorter than the tent, and with an eye at each extremity. The spring is fastened by a silk thread passed through the sponge and the eye, around the cylinder and again through the eye, and tied tightly. The other end of the tent and the eye are transfixed by a stout needle. The tent is then soaked in a thick solution of gum acacia, then wrapped closely with strong twine from one end to the other. It may now be moulded into any desired curves. A sound bent to the shape of the uterine cavity is laid on a piece of wood, and its course marked by tacks. The moist tent is then put into the place of the sound, and allowed to dry there. The needle indicates the position of the spring.

The hard dry tent is removed and the twine unwound. It must now be smoothed by fine sand-paper and the end beveled, but not to a point. Rub it with wax and burnish it with any

hard instrument. It is completed by passing a string through the opening occupied by the needle. This is for convenience of extraction, and also aids in securing the spring in the centre of the tent. As a rule, three curves will be all that will be required. Those most used are a moderate curve, only a little more than the natural uterine bend; a fish-hook curve for extreme cases; and an intermediate one, which will probably be most required.

ALBERT H. SMITH, M. D., PHILADELPHIA,

Has materially and usefully modified the lever pessary of Prof. Hodge. He lengthens the closed lever so that its length is about twice its width; he makes it ovoidal, with the apex in front, curves the anterior bar from above downward, and curves the posterior bar upward. He claims that it is easily retained in place, its length and ovoidal form adapting it to the shape of the vagina, which is connoidal, with its base toward the vaginal cul-de-sac, while, on the contrary, the rectangular pessary cannot be accommodated and retained; the curvature of the posterior bar takes away the sharp angles behind, and the centre of the bar resting directly behind the lower portion of the body of the uterus, allows it to hang over it, suspended by its vaginal attachment, without undue pressure upon the vaginal tissues, as from the straight bar the depression of the anterior bar rounds off the corners which rest against the vagina, and relieves the urethra from pressure.

Dr. S. claims as the merits of the lever pessary its ease of introduction; its deriving its support from the floor of the pelvis, making no tension of the vagina, acting as a true lever, its fulcrum being the pelvic floor, the weight—the uterus—resting upon the short arm, and the power acting on the long arm, being the elasticity of the anterior vaginal wall, the weight of the intestines, and the action of the abdominal muscles; these two latter forces, which would operate upon the uterus to keep it displaced, being utilized to elevate it; preserving the

natural mobility of the uterus; making no pressure on the neck, acting so as not to interfere with the functions of reproduction.

Perhaps not the least useful relief is that noticed by pregnant females when wearing this pessary—the absence of extreme nausea. Dr. SMITH believes this point is one calling for clinical study.

EUGENE C. GEHRUNG, M. D., ST. LOUIS,

Has invented a pessary which strongly resembles a Hodge closed pessary folded on itself. The two arches thus formed rest against the anterior wall of the vagina; the lower one resting near or upon the os pubis, according to the degree of tonicity of the vagina, from which point it derives its anterior support.

The lower branches of the lateral curves rest on each side of the vaginal aperture, in an antero-posterior direction on the vaginal surface of the perinæum. These prevent the instrument from rotating on the transverse and antero-posterior axis. An additional support is gained by the contact with the elastic vaginal walls and their close co-aptation to and insinuation between the arches and curves of the pessary. It rests within the vaginal grasp as a segment of a solid cylinder would rest in the grasp of an elastic one. Hence there is no obstruction of the vaginal space. The distance between the two arches varies from 1¼ to 1½ inches. The antero-posterior and transverse diameters vary as the size of the instrument.

The pessary is introduced with the patient on her back, the knees well flexed and separated; and the curves so placed that the instrument shall rest in the position at first described.

Dr. GEHRUNG claims that few cases of *anteversion* can resist its action, when well fitted, unless firm adhesions confine the womb to the unnatural position. It has no fixed points of resistance, is supported everywhere, and allows free motion to the womb. It is simple in construction. It is inelastic, and hence its operation is under perfect control. Its material is such that it can readily be modified to suit. It does not interfere with marital relations. It is easily introduced and removed,

and it causes no obstruction to the rectum, or bladder, or pressure anywhere.

The *anteflexion* pessary is the same pessary with the addition of a slightly excavated and inclined blade or shield. It supports the body of the womb, and compels the neck to retain its proper position and thus straightens it.

For *retroversion* and *latero-version* the pessary is the Hodge pessary, with the addition of an arched blade or shield connecting the two lateral branches into a solid body for the distance of 1¼ inches. It acts by replacing the body and preventing the neck from following its motion to an abnormal position.

Dr. G. calls this form the *retroflexion* pessary, and sums up as follows: "This pessary combines the several qualities of a retroversion, retrolatero-version, retroflexion, and retrolatero-flexion pessary, and in addition the quality of protecting, especially the rectum from cervical compression, and the womb from being thrown into complete anteversion."

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## NON-MALIGNANT GROWTHS.

T. GAILLARD THOMAS, M. D., NEW YORK.

*Polypi.* The treatment is palliative or curative. The first is necessary where the conditions are unfavorable to the immediate attempt at a radical cure. If practicable, manipulation should be delayed until the tumor is expelled into the vagina. Use palliative treatment to replace the womb if displaced, and maintain it by a proper support, removing all pressure from above; keep the patient in bed at her periods, giving only cold and acid drinks, and administering cannabis indica, opium, gallic acid, ergot, or aromatic sulphuric acid. After the epoch has lasted four days, apply a tampon with solution of alum or tannin;

keep the bowels regular and avoid fatigue; give nutritious food, bitter tonics, and nervines as they may be indicated, but avoid the use of iron, which increases the hemorrhagic tendency. At bed-time, during the interval, syringe the vagina with tepid water, and insert a suppository of tannin high up.

The curative treatment will be to remove or destroy the tumor. If the canal has been dilated by the polypus, the walls may be slit on each side nearly to the vaginal junction, and the tumor drawn out by a tenaculum. Or complete dilatation may be secured by means of tents, and the tumor may be aided in its exit by the use of ergot. If it become necessary to seek the pedicle near the fundus, it may be severed by excision, torsion, ligature, ecrasement, the galvano-caustic wire. If within reach of the knife or scissors, it may be divided. When higher up, Simpson's polyptome comes into use. Small growths may be scraped off by the curette, or twisted off with the forceps. The ligature is objectionable; ecrasement is better. For this, Hicks' wire rope écraseur is excellent. A hard, fibrous polypus, too large for its pedicle to be reached, may be cut away piecemeal by a curved scissors or Nelaton's forceps; or destroyed by deep incisions into its mass. When possible to encircle the pedicle with the galvano-caustic wire, this instrument is preferable. It cuts without force, and there is no hemorrhage.

LOMBE ATTHILL, M. D., DUBLIN.

Mucous polypi are best removed by the wire loop twisted, or by the écraseur. In all cases, the seat of origin must be cauterized with nitric acid. He passes the wire, in cases where the mass is attached to the fundus, by means of two slender silver tubes like those known as "Gooch's canulæ." When these reach the base of the tumor, they are separated and one is passed around, carrying with it the wire. The canulæ are then passed through openings in the extremity of the écraseur, the wires attached, and drawn tight until the tumor is cut off.

THOMAS ADDIS EMMET, M. D., NEW YORK,

Has invented an écraseur for the removal of these growths. He preferred a chain to the wire, and finding that this would break, and as the curved écraseur did not always prevent this, he placed three joints at the end, so that it could be opened straight, or bent upon itself at a sharp angle. To facilitate the application of the chain, the ends were attached to two flat rods or bands, which could then be passed between the two halves of the ratchet portion, and secured at the handle by a spring catch. To aid in placing the chain close up around the base of the tumor, when situated high up, as at the fundus, he employs a copper sound, with a small circular eye at its end, or a flat piece of whalebone carefully rounded and smoothed, with an opening at the end. Through the eye or opening, a strand is passed with a loop, in which is included the chain. By this instrument, the chain is very readily carried up close around the point from which the mass springs.

This author regards the curved scissors as equally applicable where they can be employed for the removal of these growths. He also uses what he calls his "enucleator," a curved steel plate with a saw-edge placed over the end of the index finger, and held in place by a band. With this he separates the tissues when the other means cannot be employed. A rule to be observed is, that when the pedicle is of small diameter, it may be cut close to the uterus; but if short and broad, the separation should be made near the tumor, lest a partial inversion or indentation be caused.

Where fibrous tumors are not pedunculated, he excites uterine contraction by traction on the growth toward the os uteri. This causes pedunculation by the crowding out of the tumor from its bed by muscular contraction behind. He prefers a cord with a slip-knot placed around the growth with which to make traction. It is of no importance as to the thinness of the uterine walls, as the contraction will close up the space as fast as the tumor is withdrawn. It is safer than enucleation, as it cannot be known

how far the uterine tissue is involved. As a principle of practice, he would delay surgical interference as long as possible; but when the tumor presents at the os, the operation should be considered, for its appearance in the vagina will lead at once to the question of blood-poisoning. The operation once begun, it must be completed, as entailing least risk. The purpose is to excite uterine contraction, and this will be continued by traction on the tumor as it is removed piecemeal. The best means for removal is a pair of blunt-pointed scissors, curved on the flat. The écraseur is not fitted for it, as it does not excite the contractions, nor is the mass so rapidly removed. After having removed the portion which first filled the vagina, follow as far as possible the uterine canal. The after-treatment will be to wash out the cavity thoroughly with hot water, and then apply freely Churchill's strong tincture of iodine. This arrests the oozing, and is a valuable antiseptic. Never introduce the subsulphate of iron into the cavity, as it is not astringent, and only fills it with coagulated blood, to decompose and cause blood-poisoning. After the iodine, a little cotton saturated with glycerine may be packed in, and we may even fill the cavity with cotton damped with a strong solution of alum. Remove this on the second day, and if bleeding has ceased, omit all dressings, and merely wash freely with warm water, and if there is decomposition, add a little brewer's yeast or carbolic acid.

*Fibrous growths* are to be removed when it can be done with a reasonable degree of safety, or their development arrested and the patient's strength preserved by checking the loss of blood. A cardinal rule is not to destroy the vitality of the tumor *in situ*, lest we add the risk of blood-poisoning. Hence, the action of hot water injections, iodine, and ergot, will be beneficial. The latter must be used only in small and repeated doses, to excite moderate contraction. It is only to be used in large doses when the os is dilated and it is believed that the tumor is ready for removal. The watery extract of ergot, in the proportion of three parts to about seven of water and the same quantity of glycerine, may be used subcutaneously.

Dr. EPHRAIM CUTTER, of Boston, proposes a carefully regulated diet, chiefly of animal food, and in a number of cases there was observed a marked decrease in the tumors.

The general treatment should be to improve the health. The patient should be in a recumbent position during menstruation, but at other times she should be as much as possible in the open air. Iron seems to increase the hemorrhage, but the action of sunlight on the skin will tend to obviate this. Constipation must be avoided. Food should be in the concentrated form, leaving little for excrement or to cause flatus. Inspissated ox-gall will aid in relieving constipation. As the tumor increases, it should be gotten out of the pelvis, lest it cause disturbance by pressure. Displacements are to be relieved by mechanical support.

To control the hemorrhage, position is very important, even keeping the pelvis above the level to check the flow toward the organs. Ergot cannot be relied on; it rather increases the flow, and should only be used in the intervals as above. Opium allays local irritation, quiets the circulation, and secures contraction of the capillaries. It is best given by the rectum. Gallic acid and cinnamon may be given, a drachm of the former rubbed up in an ounce of simple syrup; then add four ounces of cinnamon water and three of pure water; dose, a tablespoonful every two or three hours. If this cause nausea, dilute it more, diminish the dose, and lengthen the interval. Drs. CHURCHILL and MCCLINTOCK highly recommend tincture of cannabis indica in ten-drop doses three times a day. MCCLINTOCK gives $^1/_{16}$ grain of bichloride of mercury every six hours. The only reliable means are local applications: hot water injections, tincture of iodine, dilatation of the canal if necessary, and, above all, a tampon of cotton saturated with solution of alum, or one of oakum. By means of the applicator, a tuft of cotton, loaded with CHURCHILL'S tincture of iodine may be applied to the fundus, and allowed to remain until forced out. By means of a projecting end, it may be removed if required. The iodine may be injected by a hard rubber syringe, with the end properly

curved. The nozzle is to be carried up to the fundus like a probe, and the iodine forced out very slowly, the patient lying on her left side, with a sponge at the os to prevent the escape to the vaginal walls, which it would greatly irritate. When the strength is not too much exhausted, she should be placed on her knees and elbows, with the os exposed by the speculum during the injection. This generally promptly arrests the hemorrhage. The amount injected should not exceed a drachm. In the absence of the long-nozzled syringe, a flexible catheter may be carefully passed up, and the injection thrown in by means of a glass syringe. To increase the action of the iodine, hot water irrigation should be used. A rubber bag may be introduced on the point of the sound, and then filled with water, thus making direct pressure on the bleeding surface.

Surgical measures are the division of the cervix and the destruction of the tumor. VELPEAU, AMUSSAT and SIMS enucleate or tear these tumors from their beds. The late Dr. ATLEE took out a section, and thus destroyed the vitality. SIMPSON introduced caustic within the mass.

G. DE GORREQUER GRIFFITH, L. R. C. P., LONDON,

Puts the patient to bed and keeps her there, thus securing quiet in every way (*Obst., Jour., G. B. & I.*, March, 1878); cleanses the bowels, and two days after dilates the os and cervix with a sea-tangle tent to a point short of occasioning much pain. Behind the tent, he inserts a tampon of cotton-wool soaked in iodine and glycerine, or glycerine and Condy's fluid. At the end of two days, a great watery discharge issues from the vagina; the tampon may be slightly tainted; the os will be spongy and soft. The vagina must be well washed with a disinfectant. At the end of a second day, a larger tent is used, and so repeated till the os and cervix admit two fingers. Thus he disperses small intra-mural fibroids, situated in the lips of the os, in the cervix, or even at the fundus, and malposition is often corrected. Intractable cases require more dilatation, and often painting the

os and cervix with the acid nitrate of mercury; or in slow cases, he packs the interior of the uterus with pellets of cotton-wool soaked as above. This he repeats till the cure is effected, say every two days. Larger tumors require that the liquid mercury be swept lightly around the cavity by means of a wire and a packing of wool, as above. At the next sitting the mercury is more freely used, being well tolerated; and finally he introduces a pellet squeezed out of the mercury, held in place by the tampon and left for two days, using at the same time, by the rectum, morphia suppositories. During this time, he gives ergot and strychnia, as they act on the enlarged and dilated womb and aid the dispersion. He even uses this plan where growths involve the womb itself intimately; the shorter the pedicle, the more hopeful the case.

Never pack the womb too full of the pellets, lest the pain they cause requires their removal.

Latterly, he uses in place of the mercury, purified carbolic acid in crystals, or a saturated solution by the pellets, and packs the cavity below the os, and even the upper portion of the vagina, with wadding steeped in glycerine. The carbolic acid allays the pain excited by the mercury, if they are used together. The acid causes the living tissue to blanche, dry and shrivel.

The flow of serum from the vagina is remarkable, and may be taken for hemorrhage or even for an escape of urine. It is remarkable how rapidly fibromatous conditions were removed by the mere use of the dilating tents, with the ergot and strychnia. He explains this, that the tent has effected dilatation, expanded the os and cervix, thus causing direct pressure from within; the fibres of the womb contract, and these two antagonistic forces diminish the blood supply, diminish the growth, and it is speedily obliterated. Of course, the acids, when used, act directly as destructive agents.

## THE MEDICAL TREATMENT OF UTERINE TUMORS.

### DR. L. DE SINETY.

The radical cure is of course the removal of the tumor; but as this is often not attainable, we must have recourse to symptomatic treatment. This is principally to be directed against the metrorrhagia. The most available means are either cold applications on the abdomen or else protracted vaginal irrigations. Some employ the latter hot, but this author prefers them cold. Astringent substances, as tannin or perchloride of iron may be added. If the hemorrhage is very abundant, the tampon must be applied, and compression of the abdominal aorta. Occasionally the hemorrhage ceases after deep incisions at the cervical orifice. This is to be explained by the diminished congestion of the tissues thus brought about. Dilatation of the neck acts in the same way.

Intra-uterine injections of astringents are dangerous, and should not be resorted to.

The *ergot of rye* is the most efficient agent in hemorrhage from fibrous bodies. It may be administered by the mouth or subcutaneously. The combination he prefers is the following for a *hypodermic injection of ergotin:*

168. ℞. Ergotinæ (Ronjean's), gr. xxx.
Aquæ destillatæ,
Glycerinæ puræ, āā f.℥ ss. M.
Twenty drops every day, or every other day.

If care is taken to inject in the cellular tissue, and not in the dermis, there is little danger of accidents.

Of all the means alleged to favor dispersion of fibrous tumors, *ergot* is the only one on which Dr. DE S. can place any dependence.

For the relief of periodically recurrent pains, due to these tumors, local bleedings, together with narcotics, are indicated. Sometimes when the pains arise from pressure of the mass on

nerve trunks, a well-fitting pessary will lift the mass and give relief, or a hypogastric belt, accurately adjusted, will often answer.

### DR. J. DE LA FAILLE, OF LEUWARDEN, HOLLAND.

In regard to the treatment of the fibrous variety of tumors, this practitioner read a paper at the International Medical Congress of 1879, expressing the following conclusions:

1. The treatment of uterine fibromata is principally determined by the hemorrhage. 2. The treatment must be modified with respect to the size and seat of the tumor. 3. Internal medication is seldom successful, though it may be tried in cases of intraparietal fibromata. The same may be said of alkaline baths. 4. A very rational treatment of intraparietal fibromata consists in subcutaneous injections of ergot. 5. The usual method of dilating the uterus, by means of sponge tents or laminaria tents, is dangerous. It is important that the tents should be frequently renewed. 6. Fibrous polypi ought always to be removed with the écraseur. 7. Intra-uterine fibromata are best removed by enucleation. The same may be said of the sub-peritoneal fibromata. 8. In cases of gastro-hysterotomy, the intra-peritoneal treatment of the pedicle is preferable to the extra-peritoneal treatment. 9. The extirpation of the uterus *in toto* is preferable to the partial excision of the organ. 10. Ovariotomy is very seldom indicated in fibrous tumors of the womb.

Dr. COURTY, of Paris, has frequently urged the medical treatment of *uterine fibro-myomata*. In a recent paper presented in 1880 to one of the Parisian societies, he stated that he relied on the following methods:

1. Injections at as high a temperature as the patient could bear (about 113° F.) of water mixed with carbolic acid at the rate of twenty-five grammes per litre; this was an excellent congestive and anti-hemorrhagic means.

2. Subcutaneous injections of ergotin.

3. The electrolytic action of the continuous current applied by regulated intermittences with a metronome.

M. COURTY was of opinion that good results were certain if this method were used in the treatment of uterine fibro-myomata.

M. VERNEUIL believed that this method was only successful in about a third of the cases treated. Excellent in cases of fibroma of the congestive type, it had no effect on old-standing fibromata. In cases where profuse hemorrhage was noted, and in which one or two painful points were found in the tumor corresponding to the ovaries, subcutaneous injections of morphia soothed the pain, and also arrested the hemorrhage.

M. COURTY allowed that cure could not always be obtained, but said that his method procured, in every instance, real and considerable relief of the suffering.

Other means for arresting the hemorrhage have been suggested by Dr. A. GUSSEROW. (*Deutsche Med. Wochenschrift*, 1880, No. 22.) He injects into the uterine cavity, after dilating the cervix, weak solutions of muriated tincture of iron or of tincture of iodine. These measures should not be repeated too often, at most twice a week, and should be suspended at once if the uterus becomes sensitive, or a serous, bloody discharge is brought on, for fear the tumor will become gangrenous.

*Fibroid Tumors.* From numerous sources, lately, the assertion has been made that interstitial fibroid tumor of the uterus can be treated hypodermically by the aqueous solution of *ergot*, with eminently more satisfactory results than by any other mode of treatment, or by operation.

| | | | |
|---|---|---|---|
| 169. ℞. | Ergotinæ (Bonjean's), | ʒj. | |
| | Glycerinæ, | f.ʒj. | |
| | Aquæ destillatæ, | f.ʒj. | M. |

Inject twelve drops daily, hypodermically.

Dr. BYFORD prefers Squibb's fluid extract to any other form of ergot, and Dr. ATTHILL recommends the omission of the glycerine, and prefers a solution of one part of the extractum ergotæ liquidum (*British Pharmacopœia*) in two of water, inject-

ing fifteen or twenty minims of this each time. He always inserts the needle into the gluteus muscle, making it penetrate to the depth of more than an inch.

Dr. J. W. WALKER, of Indiana, has reported success from the use of the ergot of maize, the *ustilago maidis*. (*New Prepar.*, Jan., 1878.)

Dr. BYFORD adds some further directions on the ergot treatment in an article in the *Chicago Medical Journal and Examiner*, Oct., 1879. The mode of administration should be governed by the objects to be attained. If we desire to cause the painless absorption of the tumor, the doses ought to be moderate in size, and not too frequently administered. HILDEBRANDT administered by hypodermic injection a preparation in quantities which represented from fifteen to twenty grains of the crude drug once daily, or once every other day; and it will often be sufficient once a week. If we desire to have the tumor expelled, we should administer full and increasing doses, often repeated, and continued until the object is attained.

It will sometimes be necessary to vary the quantity and times of giving it, to suit the susceptibility of the patient; less or more, according to the amount of pain caused by it.

It is not essential to give it hypodermically, although when it does not produce much inconvenience, this is a very efficacious method; it may be given by the mouth, in suppositories, per rectum, etc.

When we administer ergot for the cure of fibrous tumors of the uterus, the beneficial action of the drug will depend upon the degree of development of the fibres of the uterus, and the position of the tumor with reference to the serous or mucous surface. The nearer the mucous surface, the better the effects. If the tumor is very near the lining membrane, we may hope for its expulsion *en masse*, or by disintegration.

We can often select the cases in which good results may be expected. There are four conditions which are usually reliable for this purpose. They are, smoothness of contour, hemorrhage, lengthened uterine cavity, and elasticity. A smooth, round

tumor denotes, for the most part, uniform textural development; hemorrhage, a certain proximity to the mucous membrane; a lengthened cavity, great increase in the length and strength of the fibres; and elasticity assures us of the fact that cartilaginoid or calcareous degeneration has not begun in the tumor.

An even, nodulated tumor may be composed of many separate solid masses. These displace and prevent the growth of the fibres to such an extent as to render contractions inefficient. When hemorrhage is not present, the tumor is probably near the serous surface, and consequently not surrounded by fibres.

*Uterine Polypi.* The *chloride of calcium*, once popular as a remedy for *goitre*, has recently been advocated by various Irish physicians as efficient in bringing about the expulsion of uterine polypi. (*Irish Hospital Gazette*, Sept. 15th, 1874.) The formula is:

| | | | | |
|---|---|---|---|---|
| 170. ℞. | Liquoris calcii chloridi, | | f.℥ iv. | |
| | Tincturæ ferri chloridi, | | | |
| | Spiritûs chloroformi, | āā | f ℥ j. | |
| | Tincturæ aurantii, | | f ℥ ij | |
| | Infusi calumbæ. | | f.℥ vij. | M. |

Two tablespoonfuls three times a day.

These polypi can also, in many instances, be expelled by the administration of ergot, either by the mouth or subcutaneously. In the hemorrhage which accompanies these growths, perhaps the best injection is of solution of subsulphate of iron, as follows:

| | | | |
|---|---|---|---|
| 171. ℞. | Liquoris ferri subsulphatis, | f.℥ ss. | |
| | Aquæ, | f.℥ ij. | M. |

To be used for intra-uterine injections.

This strength cannot be exceeded with safety, and frequently one-half the amount of the salt will be sufficient.

Prof. JONES, of the Medical College of Georgia, and other Southern physicians, have claimed that the free administration of *muriate of ammonia* brings about the discussion of fibroid

tumors of the womb, hypertrophic contractions of the uterine walls, and allied troubles. It may be alternated with ergot.

In *coxcomb granulations* of the os, the best application is strong *cider vinegar*, or crude *acetic acid*. It may be poured into a speculum and allowed to cover the diseased portion for about five minutes. This should be repeated every other day. Nitrate of silver is liable to excite hemorrhage if applied to this form of erosion.

In simple ulceration of the os much good often follows the use of *iodo-tannin*:

172. ℞. Iodinii, ℥j.
Acidi tannici, f.℥j.
Aquæ, Oj. M.

Filter and evaporate to ℥iv. To be applied to the ulcerated surface.

Or, for extemporaneous use:

173. ℞. Tincturæ iodinii,
Tincturæ gallæ, āā f.℥ss. M.

For local use.

J. T. EVERETT, M. D., (*American Journal of Obstetrics*, January, 1878,) concludes, from his notes of cases, that:

1st. A judicious use of the faradic current is as certain and powerful to produce uterine contractions as ergot.

2d. It is more easily controlled.

3d. It does not disturb nutrition, or any of the secretions, nor does it interfere with digestion.

4th. It does not induce pain in distant organs, and is not followed by cephalic disturbance or nervous shock.

5th. It does not give rise to inflammations, or produce other local injuries.

Dr. ROBERT BELL, London, reports in the *Lancet*, Feb., 1879, several cases successfully treated with ergotine suppositories. These contained each four grains, and were inserted each night, resulting in the expulsion of the tumor.

F. A. GALLOIS, M. D., PARIS.

174. ℞. Morphiæ muriatis, ʒj. ij.
Sacchari, gr. iv.
Ceræ albæ, ʒj
Butyri cacao, ʒ ss. M.

Melt over a slow fire the cocoa butter and wax, incorporate the sugar and morphia, carefully triturated together, and when the mixture is on the point of forming a mass, run it into four horns of paper, and allow it to cool.

These vaginal suppositories are useful in painful affections of the uterus, rectum, and bladder.

## RÉSUMÉ OF REMEDIES.

*Ammonii Murias.* Both Drs. W. L. ATLEE and E. R. PEASLEE have witnessed disappearance of uterine polypoids from the long-continued administration of this agent, gr. x., thrice daily. It is best given in the form of compressed pills.

*Calcii Chloridum.* This was recommended by Dr. MCCLINTOCK. (See F. 170.) Dr. TILT gives gr. x. twice daily. He remarks that its effects are more positive after the change of life, and adds the caution that its long-continued exhibition has been known to cause arcus senilis and other evidences of arterial degeneration.

*Cannabis Indica* and

*Digitalis*, as anemiants of the reproductive organs, have some claims to consideration as checking the development of new growths.

*Ergota.* The exhibition of this may be either (1) by the mouth; (2) by the hypodermic injection; (3) by suppositories. (See p. 199.) When given by the mouth, GOODELL believes its permanent effect is enhanced by combination with iodide of potassium or ammonium chloride. The os should be dilated at the same time. Prof. HILDEBRANDT proposed daily hypodermic injections of the aqueous extract under the skin around the umbilicus. He uses:

175. ℞. Ergotinæ, 6 parts.
Glycerinæ,
Aquæ, ää 15 parts. M.

Successful cases have been reported in Philadelphia by this means, one by Dr. W. V. KEATING, who uses:

| | | | | |
|---|---|---|---|---|
| 176. ℞. | Ergotinæ, | | gr. xlv | |
| | Glycerinæ, | | | |
| | Aquæ destillatæ, | ää | ℥ev. | M. |

Prof. JOHN ASHURST, Jr., employs:

| | | | | |
|---|---|---|---|---|
| 177. ℞. | Ext. ergotæ fluidæ, | | f. ʒ iss. | |
| | Glycerinæ, | | f. ʒ j. | |
| | Aquæ, | | f. ʒ ij. | M. |

Of either of these ♏ xx. is a sufficient injection: the nozzle of the syringe should be carried down to the muscular walls of the abdomen in order to avoid the formation of abscesses. Rectal and vaginal suppositories of about gr. x. each of the solid extract are used by some. The use of ergot is not wholly without danger, as some persons are greatly nauseated by it, have headache, etc. (GOODELL, *Trans. Med. Soc., Pa.*, 1880.)

*Ferrum* in various forms may be advantageously used to combat the anæmia. GOODELL combines it with ergot.

*Gallicum Acidum* stands next to ergot as a hemostatic in polypoid hemorrhages (GOODELL.)

*Hydrargyri Biniodidum.* GOODELL records the marked diminution of a very large fibroid after long-continued frictions with an ointment composed of gr. viij. of the mercuric biniodide to lard ʒ ss.

*Hydrargyri Chloridum Corrosivum.* Drs. T. M. MADDEN and ROUTH, of London, report cases where this agent appears to have diminished uterine polypoid growths in a marked degree. (*Half-Yearly Compendium*, July, 1874.)

*Iodinium.* In the medical treatment of uterine polypi, Dr. T. M. MADDEN states that he has found the long-continued use of small doses of tincture of iodine serviceable.

*Potassii Bromidum* is spoken of with decided favor by SIMPSON and GALABIN, but doubtfully by GOODELL. It should be continued for months in moderately full doses.

*Potassii Iodidum* has a certain amount of testimony in its favor,

for reducing uterine polypoids. GOODELL combines it with ergot.

*Sclerotic and Sclerotinic* acids have been employed for injection into the substance of fibroids. Dr. JOHN WILLIAMS, of London, has reported two cases in which the former promptly checked the hemorrhage and reduced the tumor.

*Sulphuricum Acidum.* In the bleeding from uterine fibroids, GOODELL recommends:

178. ℞. Quiniæ sulphatis, gr. ij.
Acidi sulphurici aromatici, gtt. xx.
Aquæ, q. s. M.
For one dose every two hours.

*Ustilago Maidis*, the ergot of maize, is said to act similarly to that of rye.

*Vinca Major* is praised by Mr. SPENCER WELLS, as an efficient agent to combat the anæmia and debility following hemorrhagic tumors. An effusion of ℥ ij. of the leaves to f. ℥ xx. of boiling water, f. ℥ ij. every three or four hours: or, f. ℥ j. of the fluid extract, are the proper doses.

### OTHER MEASURES.

*Baths*, containing bromine and iodine, taken in connection with the internal administration of these agents, are commended by GALABIN.

*Electrolysis* has been highly lauded by some authorities. (P. 199.) Its claims are not yet made out.

*Galvanism.* The constant galvanic current has caused in some instances retrogressive changes in fibroid uterine tumors. GOODELL speaks of it as an agent from which in the future much may be expected.

*Leeches.* Dr. TILT observes that even bad cases of uterine fibroids may be greatly improved by hygiene, by saline purgatives, and by the application to the cervix of two or three leeches, just before menstruation.

*Mineral Waters*, especially those of Kreuznach and Woodhall Spa, containing bromine or iodine, are believed to be valuable. Prof. A. R. SIMPSON says: "I have seen

patients who were suffering from such tumors in whom the symptoms were relieved, and in whom the growth of a previously increasing tumor was arrested, if the bulk was not immediately diminished. These mineral waters seem to me to exert some portion of their influence by acting as sedatives to the sexual organs, lessening the activity of the circulation in them, and so reducing the nutritional activity."

*Pressure*, by a firm, broad, elastic bandage retained by a perinæal strap, will give great relief in some cases.

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## MALIGNANT GROWTHS.

### DR. L. DE SINETY.

In estimating the value of alleged cures of uterine cancer, this French professor rejects all pretended to have been brought about by arsenic, conium, iodine, etc. He believes that all these rest on errors of diagnosis, and that the supposed cancer was a benign neoplasm.

Nor has he any more faith in any of the caustics, as the acids, potassa, chloride of zinc, bromine; nor in electrolysis; nor in the intra-parenchymatous injections advocated by KIEWISCH and GALLARD; nor in the amputation of the neck, which is almost sure to be followed by a relapse. In fact, the treatment reduces itself to palliating the symptoms, and prolonging life a little by temporary expedients.

To relieve the pain the only really efficient agent is *morphine*. This should not be given by the mouth, but subcutaneously, the place of election being the exterior aspect of the thigh, near the great trochanter, the cutaneous sensibility there being obtuse. Small doses should be used at first and increased later as required.

The hemorrhage may be reduced by irrigations of cold water

medicated with perchloride of iron. Internally the following is useful:

| | | | |
|---|---|---|---|
| 179. ℞. | Extracti ratanhiæ, | ʒj. | |
| | Chloral hydrati, | ʒss. | |
| | Syrupi simp., | ʒj. | |
| | Aq. menth., | ʒiv. | M. |

A tablespoonful from time to time.

Ergot has little or no influence in these cases. When the hemorrhage is violent, tamponing is demanded.

The vomiting and digestive troubles are best met by giving the food cold and in small quantities at a time. A milk diet, when practicable, is beneficial. For constipation and painful stools, laxative enemata are preferable to purgatives.

During the whole course of this malady the strength of the patient should be supported by a good hygiene, the administration of bark, and the moderate use of generous wines.

E. J. TILT, M. D., LONDON,

In flooding from cancer, scrapes away from the cervix the outlying portion of diseased tissue, and applies the liq. ferri sub-sulph., or the fuming nitric acid. There is no cure. A fair trial should be given to the solution of iodide of arsenic and mercury, each drachm containing $\frac{1}{6}$ grain protoxide of arsenic, and $\frac{1}{4}$ grain of protiodide of mercury. Dose, half a drachm twice a day. It may cause marked improvement. ATLEE had great faith in arsenic, in small doses for a long time, and locally a weak solution of iodine in glycerine. A drachm each of iodine and of iodide of potassium are dissolved in two drachms of glycerine, and applied by a brush, or on cotton, two or three times a week all over the cervix and to any part of the growth within reach. To relieve the pain, sedatives and anæsthetics. Ice to the neck of the womb is a palliative, also prolonged irrigation with cold water. To destroy the odor, the chlorinated lime, one ounce to the pint of fluid, with a drachm of laudanum, and a tablespoonful of glycerine to prevent irritation. A weak solution

of carbolic acid is a good disinfectant. A good hemostatic is a strong solution of liq. ferri sub-sulph. thrown in with a sponge, allowed to remain in contact with the cancer, and then sucked up, and some cotton-wool saturated with a styptic left in contact with the sore, to be removed in a few hours. Repeat once a week. It does good in the worst cases, and may effect a cure in mild forms. If no other operation is admitted, remove by scraping all the softened tissue that can be done without causing too much pain or bleeding.

WYNNE WILLIAMS, M. D., LONDON,

Applies to the denuded surface, and also injects, a solution of twelve grains of bromine in a drachm of alcohol. ROUTH dresses the raw surface with gastric juice. It is best to remove the diseased tissues early with the knife.

PROF. GRAILY HEWITT, M. D., LONDON.

This author regards amputation of the cervix in cancroid of the os as valuable. It arrests bleeding and exhaustive discharges He prefers the écraseur, or the scissors. He then applies perchloride of iron in glycerine on lint to the cut surface, and plugs the vagina with wetted wool. Hemorrhage is to be checked by ice water injections into the vagina and rectum, perchloride of iron or tannin, the actual cautery, and plugging the vagina. Sir J. Y. SIMPSON extols the use of a saturated solution of perchloride of iron in glycerine by means of a sponge to the surface. Tannin in fine powder, or tannic acid, may be applied through a tube or in form of a pessary. Cauliflower excrescences may be broken off, and tincture of iron injected into the mass.

Dr. HICKS found a saturated solution of alum, holding in suspense tannic acid, applied daily, very effectual. A sponge dipped in strong solution of nitrate of silver is equally valuable. To remove the offensive discharges, wash out frequently with solutions of disinfectants. For the pain, use opium, etc. It is

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found most effectual in the form of a lavement. The application of carbonic acid gas to the surface of the sore has been suggested. An ordinary quart bottle is used, with an elastic tube fitted to the cork. Eight drachms of carbonate of soda, and six of tartaric acid, are dissolved in water in the bottle, and the gas is generated. The vapor of chloroform may be mixed with it. Nutrition is important; milk is a valuable article of diet. The urinary organs often require relief. For irritability of the bladder, Vichy water, uva ursi, or pareira, with a little liquor potassæ, are useful. Sir H. THOMPSON suggests *triticum repens*.

LOMBE ATTHILL, M. D., DUBLIN.

To lessen fœtor, add half an ounce of permanganate of potassa to a pint of tepid water, and inject twice a day; or a weak solution of carbolic acid, as an ounce dissolved in eight ounces of water, a tablespoonful of this to be added to half a pint of tepid water; or nitrate of silver, 10 grs. to the ounce, of which two or three ounces should be used each time. Internally, iron and arsenic; preferably the tincture of perchloride of iron, or if the stomach is irritable, the ammonio-citrate. In cauliflower excrescence, amputate the cervix, or destroy the growth by repeated applications of caustic potassa.

T. GAILLARD THOMAS, M. D., NEW YORK,

Has never seen any benefit from the use of caustics in true cancer. He checks hemorrhage by the styptics already mentioned, but prefers for this purpose the careful use of caustics so as to produce only a superficial slough, and thus temporarily seal the vessels. Every two or three weeks, after cleansing with cold water, touch the surface lightly by the actual cautery, acid nitrate of mercury, or pure nitric acid. Relieve pain by opiates, and in many cases chloral will be found an excellent substitute or alternate for opium. Correct fœtor by the usual lotions of carbolic acid, one to two drachms to the pint, or the same pro-

portion of liq. sodæ chlorinatæ, or one drachm of powdered subsulphate of iron to the pint, or a weak solution of iodide of lead. Keep up strength by use of milk, beef-tea, etc. Use iron freely to repair damages, and quinine as a tonic roborant and an excellent remedy for the neuralgic pains.

In *epithelial* cancer, the disease may be checked if not cured, by the entire removal of the diseased portion. If amputation be not advisable, cauterization should be performed so deeply as to destroy the surfaces by means of the cautery, potassa cum calce, or the acid nitrate of mercury. This will at least relieve pain, arrest hemorrhage, and restrain the discharges. He applies the potassa cum calce in the proportion of two parts of lime to one of caustic potassa.

### PROF. JOHN CLAY, OF BIRMINGHAM.

This writer announced in the *Lancet*, March 27th, 1880, a new cure for cancer of the generative organs, which attracted general attention, and has been reported on with some apparently favorable results. His original prescription is:

180. ℞. Chian turpentine, gr. vi.
Flowers of sulphur, gr. iv. M.
Make two pills; to be taken every four hours.

No change was made in the diet or occupation, and no opiates were used. He says: "It is a most efficient anodyne, causing an entire cessation of pain in a few days, and far more effectual than any sedative I have ever given."

### DR. J. G. WESTMORELAND, OF ATLANTA,

Maintains that no remedy in use has been equal to *carbolic acid* in the local treatment of cancerous ulcerations of the womb. (*Atlanta Med. and Surg. Journal*, Feb., 1880.) Applied to the ulcer in full strength, it is neither painful nor unnecessarily destructive to tissue. Indeed, pain and irritability are relieved by it. What effect the remedy may have on the cancerous diathe-

sis, if such exist, of course has not been determined, but that it will correct the condition of malignant ulcer, no one will doubt who has made thorough application of crystallized carbolic acid warmed to the liquid state. Used in this way, cancerous ulcer of the os, neck and vagina has been known kindly to improve. Being also one of our best antiseptics, the very offensive odor attending uterine cancer is promptly destroyed by it. The application every third or fourth day by touching with saturated cloth or sponge will give gratifying results to any physician who has the charge of such unpleasant and dangerous disease.

### THOMAS ADDIS EMMET, M. D., NEW YORK.

This author, in cancer of the uterus, urges to operate without delay. When limited to the cervix, the scissors or knife is best with which to amputate, and by all means, if it can be done, get into healthy tissue. Healing the cut surface by granulation is liable to act adversely, by causing a renewal of the disease. It is better to cover the stump by sliding the vaginal tissue over it, and secure the edges of the flaps with sutures. Where the disease has advanced too far for amputation, the actual cautery must be used. All the diseased tissue is to be scraped away down to a healthy surface if possible, and then the cautery applied over the whole raw surface. The best is the thermo-cautery of PAQUELIN. The platina is kept at a white heat constantly by forcing atmospheric air into the midst of a flame of benzine vapor. Next cover the surface with a thick pad saturated with glycerine, and a tampon over it if bleeding seems likely to occur. Let the pad be detached by suppuration. When this occurs, keep the vagina clean. Solution of thymol will no doubt be useful to correct the odor. To check the bleeding, should it occur, use a saturated solution of alum. Always use these solutions at a high temperature. *Iodoform*, one drachm to an ounce of lard, will relieve pain, correct fœtor, and diminish the diseased mass.

PROF. E. S. DUNSTER, M. D., ANN ARBOR.

In the *Medical News*, this author speaks very highly of *chloral* in these cases. He uses a solution of 10 to 30 grains to to the ounce, with which he saturates a cotton-wool plug, and applies it closely to the diseased surface. When required, it may be removed by means of a string attached to the plug. He claims that it corrects the odor, and also relieves the pains.

DR. AUST. LAWRENCE

Also recommends this remedy. He gives powdered ergot, 30 grains every 6 hours, except when the patient is already reduced by loss of blood.

[For a full discussion of the medical, palliative and cauterant plans of treatment of Malignant Growths, see NAPHEY'S *Surgical Therapeutics*, Chapter XIV. See, also, Sir JAS. Y. SIMPSON'S treatment under head of Mammary Tumors, part II. of this volume.]

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## STERILITY AND ANAPHRODISIA.

These are separate conditions; the former referring to infertility following the sexual act; the latter to the absence of the subjective and characteristic nervous sensations which constitute the sexual orgasm. As both conditions may depend on a great variety of causes, these must in all cases be carefully sought out.

The causes of sterility are defined by

T. GAILLARD THOMAS, M. D., NEW YORK,

To be—

1st. Causes preventing the entrance of the semen into the

uterus, absence or closure of the vagina or uterus by an obdurator hymen, atresia, conical os, polypi, etc.

2d. Causes preventing the production of a healthy ovule, as ovaritis, cellulitis, etc.

3d. Causes preventing the passage of the ovule into the uterus, as stricture or obliteration of the fallopian tubes.

4th. Causes destroying the vitality of the semen or preventing the fixation of the ovum, as endometritis, membranous dysmenorrhœa, menorrhagia, abnormal growths, etc.

Dr. THOMAS adds:

"In spite of the fact that we have at our disposal many valuable resources for the removal of the causes which create sterility, were I asked to mention the part of the field of gynecology which yielded me the least satisfaction and the greatest disappointment, I should cite this."

Where any obstacle is present, the proper surgical operation may be performed, as imperforate hymen, atresia vaginæ, occlusion of the womb in any way. The affection is a symptom only to be reached through the malady causing it.

### ELY VAN DE WARKER, M. D., NEW YORK.

This writer, in a paper on anaphrodisia, or, as he terms it, "impotency" in women (*Am. Jour. Obstetrics*, Jan., 1878,) sums up the causes and divides them into three groups:

I.—MENTAL, subdivided into:

- *a.* Congenital psychical defects.
- *b.* Temporary mental conditions.
- *c.* Sexual incompatibility.

II.—GENERAL PHYSICAL CAUSES.

- *a.* Debility resulting from constitutional and other diseases not sexual.
- *b.* General defective development.
- *c.* Lactation.

II.—CONDITIONS OF THE SEXUAL ORGANS AND NEAR PARTS.

*a.* Defective development and result of injury.

*b.* Dyspareunia (Barnes), resulting from (1) uterine displacement; (2) hyperæmia of the uterine body; (3) ovarian inflammation or congestion; (4) colpitis either simple or specific; (5) spasmodic contraction of the vagina (vaginismus, SIMS); (6) vascular tubercles of meatus urinarius; (7) diseases of the rectum, as fistula, fissure, or inflamed piles or ulcers.

*c.* Deranged nervous system from uterine displacements and other chronic uterine diseases, and debility from exhausting discharges and chronic uterine disease.

*d.* Morbid growths.

*e.* Delayed or arrested menstruation.

The treatment of these conditions should, of course, be in the main etiological.

GRAILY HEWITT, M. D., LONDON.

This author gives as causes of this condition, abnormal conditions of the hymen; narrowness or partial closure of the ostium vaginæ, or vaginal canal; tumors interfering with intercourse, as an enlarged clitoris; spasms of the ostium vaginæ; absence or imperfection of the uterus, chronic hypertrophy, closure of the os like a valve, one lip being larger than the other, flexions, etc.; diseases of the ovaries; altered conditions of the fallopian tubes; ill-timed sexual intercourse, as women have a greater aptitude to conceive immediately after menstruation has ceased—this is the best time for intercourse; masturbation; too frequent intercourse, and diseases of the rectum.

Leucorrhœa, when alkaline or acid to excess, would cause sterility.

Sexual frigidity cannot be regarded as causing barrenness, as the reverse is constantly seen in practice. General debility and

anæmia, but especially the opposite, overfeeding and luxurious habits, are especially liable to interfere with conception. The fecundity of the human race is diminished by the life prevalent among the rich, and augmented by the habits and spare diet of the poor, in the proportion of six to one. To ascertain the cause of sterility, it is necessary to examine into the history and antecedents, the manner of menstruation, and the general bodily health. The cure depends upon the removal of the cause, if this be possible.

PROF. E. J. TILT, M. D., LONDON.

Too much hair on the upper lip would lead to a suspicion of some defect of the ovaries. In sterility, occurring in too stout a person, fine her down by exercise, mental labor, and a diet from which bread, butter, milk, sugar, beef and potatoes are to a great extent excluded. The strong sympathy between the breast and the womb confirms the idea that by exciting the former the latter may be powerfully stimulated. Dr. CHAS. LOUDON states that four out of seven women were thus enabled to become mothers. Dr. MARSHALL HALL suggests the application of a strong infant to the breast, and Dr. BAYES advises the use of a breast pump, two or three times a day. If passion be too intense, it may cause barrenness; and this has subsided and pregnancy followed after the prolonged use of cold hip-baths, cooling injections and camphor. Again, intercourse seems to act as a poison to the nervous system, causing unconsciousness, headache and utter prostration, even for days. In such cases the influence is lessened by previous attempts to induce orgasm. Temporary separation sometimes is useful, as giving to intercourse the stimulus of novelty. In Eastern countries, castor, ambergris, cantharides and aromatics are employed. When, consulted the physician should see to the health of both parties, employ tonics, keeping them apart, and let intercourse occur just after the menstrual flow.

Dr. THOMAS EDIS mentions cases where sterility was removed by connection in the genu-pectoral position.

### PROF. DR. MAYRHOFER, OF VIENNA.*

When a physician is consulted in reference to the sterility of a marriage, he should first satisfy himself whether the man or the woman is at fault. Contrary to the general opinion, in a large proportion of cases, about one-fourth of the whole, it lies with the male. It must be remembered that he may be capable of vigorous coition, and yet incapable of impregnating. (Azoö-spermia.)

The second inquiry is whether the woman has ever been pregnant, whether her infertility is not the result of constant aborting.

If this is the case, the chances of relieving her are better. But here again it is often the fault of the husband. It has been abundantly proven that men who have suffered from constitutional syphilis suffer such loss of vigor in the semen that their impregnations abort.

The most common cause of an inability to conceive is found in previous existing inflammatory affections of the uterus. The case is favorable when on examination the vaginal portion is discovered to be conical in shape and with a contracted os. Here the operation recommended by SIMS can be performed with a fair probability of restoring the fertility.

Inflammatory processes complicated with flexions or versions also lead to sterility. The displacement is to be remedied, and this, if required, followed by discission of the os.

One source of sterility may often be found in the sexual relations. When these are quite frequent, there is not only less liability to conception but also greater to early abortion. The popular proverb "No grass grows on a well-trodden path" applies here. Women of cold natures, averse to intercourse, bear more children than those of ardent passions. Prostitutes rarely conceive. The rare indulgence which some married couple practice in order to avoid too large a family actually favors child-

*Handbuch der Frauenkrankheiten*, edited by Billroth, part II.

pearing. Hence, when children are wished, strict moderation in coitus should be enjoined.

Experiments prove that acid fluids are very destructive to the spermatozoids. Hence when the vaginal mucous discharge is acid, especially if it is also abundant, this may lead to infertility. The remedy here is to employ an alkaline lotion (one or two per cent. of caustic potash in distilled water,) just before coitus.

Some women say that the ejaculation of the male immediately flows from the vagina. It is hardly possible that the whole of it can escape in this manner. But to such the old advice can be given that coition be conducted in the knee-elbow position.

When on examination of the canal of the os it is found narrow and closed with a plug of tenacious mucus, it is possible that this obstruction prevents the entrance of the sperm into the uterine cavity. A simple and harmless means of remedying this is for the woman to introduce into the vagina and against the os a sponge dampened with glycerine and retained by a string for withdrawing it. In a few hours this stimulates the uterine secretions and frees the canal of the cervix from obstructions.

*Discussion* and *amputation* of the os for sterility are by no means sure remedies; so far only a small percentage of success has followed their employment. Undoubtedly too much has been expected from them. It is better to precede them with *cauterization* of the os, a much simpler procedure, which alone is sometimes sufficient.

That *chronic cervical endometritis* is a frequently overlooked cause of abortion and consequent sterility, has been pointed out by Dr. ARTHUR W. EDIS. (*British Medical Journal*, Nov., 1878.)

On examination *per vaginum*, the cervix may be found to be apparently healthy, no roughness nor any unusual condition exciting attention. In other instances the cervix is found to be more bulky than normal, the os puffy and patulous, the lining mucous membrane being granular. On passing a speculum, however, whether the cervix be normal in appearance or otherwise, we shall generally find exuding from the os uteri a quantity of glairy tena-

cious mucus, like unboiled white of egg, which is with considerable difficulty removed from the cervical canal.

This condition not unfrequently ensues shortly after marriage, and sterility is an almost invariable result; but should conception occur, abortion almost invariably ensues within the first few months, and, unless the patient be properly treated, much subsequent uterine disturbance is sure to follow.

Where the external os is naturally very small and circular, it may be necessary to divide it crucially, or even to slit up the cervix for half an inch or so, in order to prevent the tenacious discharge from accumulating in the cervical canal.

His belief is that many cases of sterility, where the difficulty is overcome by free division of the cervix with the metrotome, are benefited as much by the depletion which ensues, and by the discharge being allowed free vent from the cervical canal, as by the division of any supposed stricture of the internal os uteri.

Where the cervix is very bulky, the lips somewhat everted, and the canal very granular, nothing proves of so much service as local depletion by means of scarifying the surface or puncturing the cervix in several places, allowing an ounce or two of blood to flow, encouraging its continuance, if necessary, by warm water injections, and subsequently inserting tampons of cotton-wool saturated in glycerine, which tend to keep up a copious watery discharge and so lessen the bulk of the cervix.

In cases where it is not deemed necessary to resort to division of the cervix or scarification, the insertion of a laminaria tent for twelve or twenty-four hours, so as to open up the cervix and expose thoroughly the inflamed mucous surface, and thus enable us to act freely upon it, may prove of much benefit. Care must, however, be taken that inflammatory mischief be not thereby set up.

## RÉSUMÉ OF REMEDIES.

*Gradual Dilatation* of the neck of the uterus by means of flexible bougies has incontestably good results in some cases. It apparently acts as a general excitant to the sexual system.

*Periods of Predilection.* Dr. COHNSTEIN, of Heidelberg, (*Arch. für Gynækologie*, Bd. xv., 1879,) has collected a number of observations to show that generally sterile women are more likely to conceive at certain periods of the year than at others, and to carry the embryo to maturity. These "periods of predilection," however, cannot be expressed in general terms, but must be decided for each individual case by independent observation.

*Injections.* Dr. DE SINETY recommends lukewarm alkaline vaginal injections taken on going to bed. Vichy water may be used, or the following, which, he says, preserves for a very long time the activity of the spermatozoids:

181. ℞. Caustic potash, gr. iij.–v.
Sugar, ʒ i.
Water, f.ʒ vj. M.
For vaginal injection.

*Alkalies.* As above observed by Dr. MAYRHOFER (page 216), the hyperacidity of the vaginal secretions may destroy the spermatozoa. This acidity may exist without any derangement of the health. Dr. A. CHANIER states (*Bull. de Thérapeutique*, June, 1880,) that the best remedy for this abnormal condition of the utero-vaginal secretions is the adoption of an alkaline regimen (alkalies internally, alkaline baths, and tepid alkaline vaginal injections); that when the utero-vaginal secretions become neutral the obstacle to fecundation is removed, and conception will probably take place; and that this disappearance of acidity under an alkaline treatment explains the success obtained in the treatment of sterility at the alkaline and sulpho-alkaline spas, as well as the renown of certain mineral springs. (*Bubenquelle.*)

In order to change the acid secretions of the vagina, which destroy the spermatozoa, Dr. CHANIER, of

Paris, recommends alkalies, alkaline drinks and baths, such as of Vichy water, and alkaline vaginal injections, as :

| | | | |
|---|---|---|---|
| 182. ℞. | Sodii sulphatis, | ℥j. | |
| | Albuminis ovi, | j. | |
| | Aquæ, | Oj. | M. |

For a vaginal injection.

*Bull. Gen. de Thérapeutique*, Nov. 12th, 1880.

## NYMPHOMANIA.

The form of genital erethism which is currently known under this name, is usually symptomatic of disease of the ovaries, of the uterus, or of vaginal or vulvar prûritus. In all cases, close study of its causative relations is demanded, with a view to their removal. In general treatment, the genetic sedatives mentioned below, especially the potassic bromide, should be exhibited in full doses.

Occasionally the disease is distinctly of centric origin, depending upon obscure cerebral or cerebellar disorganization, when it is to be considered as one of the symptoms of mania, and treated accordingly.

In some rare cases (one mentioned in the *Trans. Gyn. Soc. of Boston*) it is marked and persistent, without any other defect either of the local or general health observable. In such instances, the treatment can only be tentative.

### RÉSUMÉ OF REMEDIES.

*Camphora* and its *monobromide* have each considerable power as anaphrodisiacs, especially the latter, gr. iv., in capsules, three or four times a day.

*Cannabis Indica* is a powerful sedative, with special influence on the uterus and its annexes, in relieving hyperæthesia and reducing hyperæmia.

*Conium.* Dr. ALFRED MEADOWS observes (*Brit. Med. Jour.*, July, 1879,) that of all the anodynes we possess, none can compare with conium as an anodyne to the generative or sexual organs. It calms vascular excitement and moderates ovulation itself. Gr. j. of the alkaloid conia may be used in a vaginal pessary nightly.

*Digitalis* lessens the flow of blood to the generative organs, and in some cases acts very satisfactorily.

*Ether.* Dr. LAURENCE TURNBULL combines ether with camphor in abnormal sexual excitement

183. ℞. Vitelli ovi, f.℥ ij.
Pulv. camphoræ, ℥ ij.
Ætheris, f.℥ ij. M.

Add the ether to the camphor, and then the emulsion. Dose, a tablespoonful every two hours.

*Ferri Bromidum* acts moderately in sexual erethism, but less efficiently than the potassic bromide.

*Hyoscyamus.* TILT combines camphor with hyoscyamus.

184. ℞. Camphoræ, gr. ij.
Ex. hyoscyami, gr. j. M.

For one pill. Two or three, thrice daily.

*Lupulina* has been found effectual as an anaphrodisiac, in doses of six to twelve grains several times a day.

*Potassii Bromidum* is *par excellence* the sedative of the reproductive system. Dr. ALFRED MEADOWS believes that by its steady use we may limit ovulation, and indeed absolutely suspend the function altogether and produce in time an atrophy of the ovary. (*Brit. Med. Jour.*, July 12th, 1879.) The dose should be not less than ℥ ss. three times daily.

*Stramonium*, in small doses, is said by PHILLIPS (*Materia Medica*) to be very useful when this affection is unconnected with disease of the sexual organs, and where there is no considerable depression of the mind.

*Zinci Bromidum* is given by CHARCOT as an anaphrodisiac in doses of gr. v.–xx., daily.

*Clitoridectomy*, as practiced by the late Mr. I. BAKER BROWN, of London, is justifiable where other means fail, and the cause appears to be local irritation.

# CHAPTER III.

# DISEASES OF THE VAGINA, URETHRA, AND BLADDER.

*Synopsis of Diagnostic Points — Vaginitis, Acute and Chronic, Non-specific — Vaginitis, Specific, Gonorrhœal — Vaginismus and Dyspareunia — Vaginal Growths — Pruritus Vulvæ and Vulvitis — Cystitis, Acute and Chronic — Urethritis — Urinary Disorders — Irritable Bladder, Dysuria, Polyuria, Ischuria, Enuresis, Vesical Tenesmus, etc.*

## SYNOPSIS OF DIAGNOSTIC POINTS.

### VAGINITIS.

In the various forms of *vaginitis*, the chief difficulty in diagnosis is to distinguish gonorrhœal from simple inflammations. Dr. N. L. GALABIN, however, asserts (*Diseases of Women*, 1879,) that a conclusion based upon the following signs, or the majority of them, will be right in ninty-nine cases out of a hundred.

Gonorrhœal vaginitis is characterized by:

1. Its sudden onset.

2. The markedly yellow or greenish color, offensive smell, and irritating quality, of the discharge.

3. The smarting on micturition produced by extension of the inflammation to the urethra.

4 The occurrence of inflammation or abscess in the vulvo-vaginal glands, the ducts of which can often be distinguished as injected points just in front of the hymen or its remnant.

5. Marked œdema of the vulva and buboes.

6. The communication of contagion to the male

When most of these are present, the case is *almost*, but not entirely, certain to be one of specific infection.

Dr. LOMBE ATTHILL says, speaking of the two forms of vaginitis: "I must avow that I know of no means of distinguishing with any certainty between the two." (*Diseases Peculiar to Women*, p. 37.)

An almost pathognomonic sign of gonorrhœal vaginitis, according to Mr. TAIT, is *œdema of the vulva*. All cases of specific origin do not present it; but where it is present, it may be considered the strongest proof of infection; and where this is combined with a high degree of pain and scalding, especially during micturition, the case may be considered as beyond doubt of infectious origin. The discharge in such cases is profuse, purulent, and not glutinous, and the mucous surface of the vagina is of a yellowish-red color; whereas in non-specific or catarrhal vaginitis, the discharge is scanty and tenacious, and the mucous surfaces of a purple hue.

Dr. L. DE SINETY gives another diagnostic point which he considers next to pathognomonic. It is based on the fact that *urethritis* in the female, of other than gonorrhœal origin, is almost unknown; its presence, therefore, is nearly a proof of blenorrhœal poison; but it must be determined by a peculiar procedure. Having carefully cleaned the vulva and vestibule, the finger introduced into the vagina and pressed upon its anterior wall, is to be withdrawn, continuing the pressure from below upward, and from behind forward. Repeating this two or three times if necessary, the liquid in the urethra will be brought to the orifice and can be examined.

This measure should be employed some time after micturition. If pus is discovered, the urethritis, and with it the gonorrhœa, is demonstrated. The only possible error would be a urethral chancre; but this would certainly be felt by the finger used as directed. (*Traité de Gynecologié*, 1880.)

### CYSTITIS.

The principal local signs of inflammation of the bladder are pain, tenesmus, and frequent desire to urinate, followed by straining as if the organ had not been fully emptied. The pain is usually a dull ache in the perinæum and the sacrum. Frequently the color and odor of the urine are little changed; mucous sediment is usually present.

The frequent urination differs from that seen in pregnancy and prolapsus by not diminishing when the recumbent position is assumed. The presence of tenesmus differentiates it from that witnessed in abdominal tumors, pelvic peritonitis, and inflammations of the urethra. Palpitation and percussion of the abdomen will develop tenderness of the bladder, if it exists. The catheter or sound will distinguish cystitis from the pressure of stone or other foreign body in the bladder. And the endoscope affords a means of ascertaining the exact appearance of the interior of the bladder and urethra.

Dr. E. J. TILT observes: "What one man calls chronic cystitis, another calls irritable bladder," so closely, in many instances, do these conditions shade into each other.

### URINARY DISORDERS.

The functional disorders of the bladder are divided into the following forms:

1. *Polyuria*—frequent urination and in considerable quantity.
2. *Ischuria*—difficult urination and imperfect emptying of the bladder.
3. *Dysuria*—painful urination.
4. *Enuresis*—incontinence of urine.
5. *Vesical tenesmus*—spasmodic pain after urination is completed.
6. *Vesical Irritability*—frequent and painful micturition, with the passage of very little urine.

## VAGINITIS, ACUTE AND CHRONIC—VAGINAL CATARRH—LEUCORRHŒA—COLPITIS.

Of the general means at our disposal to combat vaginal affections, the following survey is given by

DR. A. LEBLOND, OF PARIS.*

*Vaginal Injections.* This writer observes that the temperature of vaginal injections has much to do with their effects. Taken cold, they produce an afflux of blood to the pelvic basin, and are thus stimulant; while taken warm, their action is sedative. The dangers which some writers have referred to as attending vaginal injections are probably owing to the fluid being thrown into the uterus; this can largely be avoided by using a syringe the apertures at the end of which are on the sides, and not at the extremity of the nozzle. When there is much inflammatory action in and near the vagina, the fluid should be thrown in very gradually, as long as ten or fifteen minutes being consumed in an injection. In such inflammatory conditions, injections of infusions and solutions of hyoscyamus, belladonna, etc., are often employed with advantage; these should always be administered lukewarm, as cold applications in such conditions may lead to injurious reactions.

*Vaginal Irrigations.* These may be either of liquids, as water, plain or medicated; or of gases, as carbonic acid gas or the vapors of chloroform, ether, etc. A variety of apparatus has been employed at various times, which need not be here described. Whichever one is used, the irrigation should continue at least half an hour at a time to be efficacious.

In uterine neuralgia and dysmenorrhœa, advantage has been derived from injection of *chloroform* vapor into the vagina and uterus. This may be done by the apparatus devised by SCAN-

* *Traité de Chirurgie Gynécologique*, Paris, 1879.

ZONI, or by means of a bottle with a large cork, into which two tubes are introduced, the one connected with a vaginal cannula, the other with a hand-ball for forcing air. The chloroform is poured on some cotton in the bottom of the bottle, the cork inserted, the cannula introduced into the vagina, and the vapor driven in by pressing the ball. The injection of chloroform vapor sometimes produces considerable irritation of the vaginal walls, and it therefore must be used with caution, and not of much strength.

*Medicated Tampons.* These are valuable in many forms of vaginitis. They should be long, so as to separate the vaginal walls throughout their whole extent, and made of dry wadding. They are medicated with glycerine, the glyceroles, alum, tannin, *saponified coal tar* (which has been highly extolled by M. SIREDEY,) or other substance.

The proper introduction of the tampons can only be done with a speculum. Their extraction will be facilitated by annointing them with cerate or oil. They should not be allowed to remain in for many hours at a time, lest they interfere with urination. In extracting them, patience and care, and the free use of warm water, are often necessary to avoid painful dragging, or laceration of the delicate lining membrane of the vagina.

*Vaginal Cataplasms.* At one time this method of medication was much employed, but of late years has fallen out of use. The neatest and most effectual are prepared from wadding soaked in infusion of *fucus crispus*. It is to be had ready prepared from pharmacists, in the form of sheets. A piece about three inches square is cut off, moistened with warm water, rolled into the form of a cylinder, and a string being attached to facilitate its withdrawal it is inserted into the vagina by the hand or a *porte-tampon*. To be efficacious, they should be renewed daily, and without interruption for considerable time. They have been found valuable in many inflammatory affections of the vagina and os.

*Vaginal Suppositories, or Medicated Pessaries.* These have been familiar to the profession from the earliest antiquity. The

excipient may be cerate, cocoa-butter, or petroleum products containing sufficient paraffine to give consistency; the active ingredient is belladonna, morphia, iodide of lead, etc. The most appropriate size is an inch and a half in length, and three-fourths of an inch in circumference. They can be introduced daily by the patient herself. As the absorptive power of the vaginal mucous membrane is very slight,* they are less efficacious than rectal suppositories.

### LOMBE ATTHILL, M. D., OF DUBLIN.

In subacute vaginitis, this author states that a mode of treatment of the greatest value is by the application of *glycerine*. With this a roll of cotton-wadding, with a strong thread attached, is saturated, introduced into the vagina through a speculum, and left for twenty-four hours. The glycerine, by its affinity for water, produces a copious, serous discharge, which in a marked degree relieves the congestion that exists.

Dr. ATTHILL does not employ either alum or sulphate of zinc in vaginal injections where any inflammation is present. They both coagulate the albumen in the discharge, and cause much discomfort. Borax is better, as

185. ℞. Sodii biboratis, ʒj.
Aquæ, Oj. M.

In some cases, much benefit will be derived from adding *tobacco*, gr. xv.–xxx., to this amount; or when the patient is nauseated by the tobacco, one ounce of hops may be substituted.

Where there is no vaginal irritation, but only a profuse and weakening leucorrhœal discharge, astringents, such as alum or sulphate of zinc, 3j. to water Oj., will often prove very useful. So also will decoction of oak bark, although this has the objection of staining the linen.

* Dr. HAMBURGER, however, and some other writers have maintained that the absorptive power of the vaginal surface is considerable. The general assumption is that it is one-half that of the rectum. As the fact rests uncertain, caution should be exercised in using the more potent drugs.

### T. FINCH, M. D., OF ILLINOIS.

| | | | |
|---|---|---|---|
| 186. ℞. | Potassii chloratis, | ʒ iv. | |
| | Potassii permanganatis, | gr. x. | |
| | Aquæ, | Oj. | M. |

Inject a teacupful morning and evening, in acute vaginitis. Warm sitz-baths and saline laxatives are important accessories. (*Chicago Medical Examiner*, December, 1874.)

### DR. EDIS, OF MIDDLESEX HOSPITAL, LONDON.

In the subacute form of vaginitis this writer recommends swabbing the vagina freely with strong *carbolic acid*. A speculum is inserted, and the fundus vaginæ first touched; the speculum being gradually withdrawn, the acid is allowed to come into contact with the whole length of the vagina, stopping short just before the junction of the mucous membrane with the vulval outlet, otherwise intense burning pain will be produced. Care must be taken not to allow any excess of the acid to run down externally. It is well to insert a pledget of cotton-wool soaked in oil just within the orifice of the vagina, to prevent this; but should much burning pain ensue, the patient is directed to squeeze a little olive oil into the passage, and to insert a morphia suppository *per anum*. In several instances, this method of treatment has been adopted with marked success; two or three applications, at most, arresting the discharge, after several weeks' ineffectual treatment with ordinary lotions.

### PROF. SCANZONI.

This author recommends, in vaginitis, the employment of a tampon rolled in powdered alum. If the sensibility be too acute, the alum is to be mixed with two parts of sugar. The tampon should not remain in the vagina longer than twelve hours, and ought to be introduced every two or three days. When it is withdrawn, the vagina should be cleansed by warm water injections, and a bath taken. Some physicians replace the alum tampon by a sachet of gauze filled with an astringent powder, such as oak bark.

### SIR CHARLES CLARKE, OF LONDON.

This distinguished physician often prescribes the following internally in protracted leucorrhœal discharges. It is also highly praised by Dr. S. ASHWELL in his work on *Diseases of Women:*

187. ℞. Infusi cascarillæ, f.℥j.
Aquæ pimentæ, f.℥ss.
Tinct. sabinæ comp., f.℥i.–ij.
Syr. zingiberis, f.℥j. M.

For one dose three times daily; a blister to the sacrum.

### DR. BUYS, OF BORDEAUX.

This author (*Bordeaux Medical*, 1873,) recommends in chronic discharges from the vagina the following injection:

188. ℞. Tincturæ iodinii, gtt. xiv.
Acidi carbolici, gtt. vi.
Glycerinæ, f.℥j.
Aquæ destillatæ, f.℥vj. M.

For a vaginal injection.

### PROF. TRÉLAT, PARIS.

The following has been extolled by Professor TRÉLAT, in vaginal leucorrhœa:

189. ℞. Acidi carbolici pur., gr. xv.
Aquæ coloniensis, ℥j.
Aquæ, ℥ij. M.

With this he moistens a tampon, and carries it to the bottom of the vagina. After the surfaces have been cleaned by the use of this, he substitutes for it a milder preparation, as

190. ℞. Acidi tannici, ℥j.
Glycerinæ f.℥j. M.

To be applied on a tampon.

### DR. A. A. BOINET, PARIS.

191. ℞. Tincturæ iodinii, f.℥iij.
Acidi tannici, ℥j.
Potassii iodidi, ℥ss. M.

This solution is employed to paint the vagina, in acute or chronic vaginitis, and the uterine neck, in engorgement and ulceration. The proportion of the tincture of iodine is to be lessened, according to the character of the inflamed tissues and the effect that it is desired to produce.

J. N. DEMARQUAY, M. D., PARIS.

192. ℞. Acidi tannici, gr. xv.–xxx.
Glycerinæ, f. ʒ ijss. M.

Tampons of wadding immersed in this solution are introduced into the vagina after the acute symptoms have been relieved by baths, emollient injections and repose.

M. MAISSONNEUVE, PARIS.

193. ℞. Ferri sulphatis, ʒ ijss.
Aquæ, Oj. M.

This solution is advised in injections in vaginitis. After each injection, a certain quantity of starch is to be introduced into the vagina.

EDMOND LANGLEBERT M. D., PARIS.

194. ℞. Tincturæ iodinii, f. ʒ v.–x.
Aquæ distillatæ, O ij.
Potassii iodidi, q. s. to prevent the precipitation of the iodine. M.

A useful injection in vaginitis after the acute stage has passed. Ulceration, if any exist, should be lightly touched with nitrate of silver. If the vaginal discharge be offensive, the following injection is useful:

195. ℞. Liquoris sodæ chlorinatæ, f. ʒ vj.
Aquæ destillatæ, O iss. M.

E. J. TILT, M. D., OF LONDON.

This author states that whether vaginitis occurs spontaneously or as the result of uterine catarrh, it is best cured by the injection of a solution of nitrate of silver. His usual solution is one of forty grains to the ounce, and he directs that the patient be placed on her back, a small glass speculum introduced as far as

These tampons act better in vaginal leucorrhœa than injections. They may profitably be alternated with alkaline vaginal enemata. A general tonic treatment is often required to aid these local measures.

### PROF. J. QUIBAC, OF MONTPELLIER.*

This writer defends the opinion that chronic leucorrhœa is essentially of two varieties, The first, or *active*, form depends etiologically on a constitutional cachexia, as the scrofulous, rheumatical or gouty. While it is often possible, in these cases, to check the flow by persistent medication with stimulants and astringents locally, our author believes that it is bad treatment to do so, the constitutional taint being almost sure to re-appear in some graver form. He looks upon the leucorrhœa in such cases as a sort of emunctory to the system, which should not be directly interfered with. Treatment should be constitutional, and directed toward the cachexia, with the disappearance of which the leucorrhœa will spontaneously subside.

The second, or *passive*, form is nearly always the result of an anæmic or chlorotic condition of the blood, or of an enfeebled constitution in women of lymphatic temperament. The indication here is primarily for ferruginous preparations, a liberal diet, and favorable hygiene. Local treatment is of much less moment.

In fact, the common plan of vaginal injections of astringents, etc., can only claim a prominent position in the treatment of this malady when the cause is distinctly local, as inflammations of the os, irritations from foreign bodies, etc.

### DR. DESPRÈS, OF PARIS.

The inconvenience, if not absolute danger attending the plug *à demeure* in certain vaginal and uterine affections, has often

* *Thérapeutique Médicale*, Paris, 1879.

been dwelt upon by many surgeons of note, but according to M. DESPRÈS, these inconveniences have been singularly exaggerated, at least when the plug is judiciously used. Against the most frequent affections of the vagina and vaginal portion of the uterus, M. DESPRÈS has recourse to a very simple means of cure. The agent he employs is a medicated plug called *tampon de Lourcine*. The employment of this tampon can be traced back to the foundation of this hospital, but, like many other excellent remedies, was abandoned. The principle to which it owes its virtue is *sulphate of alum*. This substance is buried in a piece of cotton wadding about the size of a walnut, and covered by a bit of fine linen. The plug thus formed is armed with a string to draw it out when desired. The quantity of alum used is two grammes. Vaginitis of the gravest type is cured in five or six weeks by the application of this plug. In ulceration of the vaginal cervix and os, caustics should never be used, which, according to Dr. DESPRÈS, only tend to aggravate the wound. The plug, on the contrary, succeeds admirably, presenting a double mode of action. It is endowed with astringent properties resulting from the dissolving of the alum in the utero-vaginal liquids. It acts also by compression, especially if care be taken to put it in the posterior cul de sac of the vagina. It suffices to apply one plug a week, and it should not be left in longer than twenty-four hours, after which all the alum is dissolved, and the plug becomes a foreign body, which should be withdrawn. The withdrawal effected, the local treatment is limited to the injection three or four times a day of water, as warm as the patient can support.

HENRY M. FIELD, M. D., OF BOSTON.

*Atony of the vaginal walls.* This condition is quite common, accompanied or not by a leucorrhœal discharge. Frequently this may be relieved by stringent vaginal suppositories, as,

200. ℞. Acidi tannici, gr. x.
Butyri cocoæ, q. s. M.
For one suppository. One daily.

For this, borax or alum may be substituted. The borax is a mild astringent and local tonic. The extract of rhatany may also be used with excellent results. (*Jour. Gyn. Soc., Boston*, vol. VI.)

## RÉSUMÉ OF REMEDIES.

### INTERNAL REMEDIES.

*Alumen*, in doses of gr.–v. viij. thrice daily, in combination with pilulæ aloes or with nitre (gr. x.,) is productive of good in some obstinate cases of leucorrhœa.

*Alkalies* are often of value in correcting acrid discharges from the vaginal membranes.

*Cantharides.* The use of the tincture, once so highly praised by Dr. DEWEES and others, has fallen into comparative disuse. It was given gtt xx. thrice daily, in a demulcent draught, the dose being subsequently increased to gtt. xl–l., until it produced slight strangury, when it was diminished or the medicine discontinued. The average period of cure was about four months.

**Copaiba* is highly spoken of by a number of writers, in doses of ℥ xv. thrice daily.

*Cubebs* have been employed with success.

*Ergot*, in doses of gr. v. thrice daily, often gives good results, especially if a blister be applied to the sacrum.

*Gallæ Pulvis*, in doses of gr. x.–xx., in decoction of tormentilla, daily, is given with great benefit at the Lock Hospital, London.

*Hæmatoxyli Lignum*, in decoction, has been employed with advantage.

*Juniperus* frequently exerts a beneficial influence.

*Krameria.* The extract, in doses of gr. xx. daily, often arrests the discharge and improves the tone of the system.

*Potassii Nitras.* Dr. DEWEES prescribed the following with success in some obstinate cases:

201. ℞. Potassii nitratis, ʒ v.
Aluminis, ʒ ijss. M.
Divide into thirty powders; one thrice daily.

*Pulsatilla*, tincture, gtt. v. thrice daily, is said by PHILLIPS quickly to relieve leucorrhœa attended by pain in the

loins, depression and derangement of the nervous system.

*Sabina* has been recommended. Its use is most promising in obstinate leucorrhœal discharges.

*Tannicum Acidum*, in doses of gr. ij.–iij. twice or thrice daily, in aqueous solution, combined with a small portion of dilute nitric acid, has been found an efficacious remedy.

*Terebinthinæ Oleum* is recommended, in small and repeated doses, by Dr. PEREIRA, in chronic cases, unattended by inflammatory symptoms.

### VAGINAL INJECTIONS.

*Acetum*, ʒ ij. to a quart of water, is a popular and often useful domestic remedy.

*Acidum Salicylicum.* Injections of sylicylic acid have been used with perfect satisfaction in all discharges from the vagina. This formula is offered:

202. ℞. Acid. salicylic., ʒ iss.
Glycerinæ, f. ʒ iij.
Aquæ, O ij.
SIG.—For six injections. One daily. M.

In uterine catarrh the canal should be injected by means of a catheter small enough for the purpose. The acid should be well dissolved in the liquid, for obvious reasons. This method is highly recommended in the treatment of chronic blennorrhagia, and it is said to succeed perfectly.

*Aloes.* French writers have lauded in chronic and obstinate vaginitis, especially of blennorrhœal origin, injections medicated with tincture of aloes. (*Fonnsagrives, Thérapeutique Appliquée*, vol. II.)

*Alumen.* Dr. TYLER SMITH, of London, has found the following injection very serviceable:

203. ℞. Alumnis, ʒ ss.
Acidi tannici, ʒ j.–ij.
Aquæ, O ij. M.
One-half to be used at night, and the other half in the morning.

Oak bark decoction also makes a good vehicle:

204. ℞. Aluminis, ʒ j.
Decocti quercus albæ, O j. M.

Dr. E. J. TILT, of London, remarks that he has repeatedly known the prolonged use of alum injections produce an irritable, sub-inflammatory state of the cervix uteri; he advises, therefore, when astringent injections are long continued, to use those of alum, zinc and sugar of lead, on alternate days. LEBLOND notes that it hastens the exfoliation of the vaginal epithelium, and curdles the albumen in the discharges, and is objectionable on these accounts. Dr. ATTHILL never uses it when any inflammatory action is present.

*Ammonii Murias* has occasionally been used in vaginal injection:

205. ℞. Ammonii muriatis. ʒj.–iv.
Aquæ, ℥j. M.

*Argenti Nitras*, in solution, has been advised as a vaginal injection:

206. ℞. Argenti nitratis, gr. iij.
Aquæ distillatæ, f.ʒ ij. M.

This agent, once very popular, is now much less so. ATTHILL remarks that better results can almost always be obtained by other means, and this is the general opinion. Dr. SINETY, however, still recommends painting the *whole* of the vaginal wall with a solution of 1 to 30.

**Bismuthi Subnitras*, applied once a day in powder, on a small piece of charpie, by means of a speculum, to the whole of the vaginal mucous membrane, is an effectual remedy in some cases. Or it may be mixed into a thick cream with glycerine, and applied to the whole of the vaginal membrane.

*Boracicum Acidum.* Dr. WARREN GREENE, of Maine, has employed with marked benefit in acute vaginitis, a *glycerole of boracic acid.* (Boston *Med. and Surg. Jour.*, 1880.) Hot glycerine dissolves 3 iij. to the ounce, and holds it perfectly on cooling. As a lotion, it may be used ʒ ij. to water ℥j.

*Calcis Aqua.* The vaginal injection of a weak solution of lime-water sometimes effects a cure after the failure of other remedies.

*Catechu.* The infusion, injected once or twice a day, often greatly lessens the discharge.

*Cocculus Indicus* is recommended by PHILLIPS, when the discharge is of a sero-purulent character, with pain in the lumbar region. Gtt. v.–x. of the tincture, two or three times a day.

*Cupri Sulphas.* The following injection, given after previously washing out the vagina with soap and water, is of service:

207. ℞. Cupri sulphatis, gr. xx.–xxx.
Aquæ tepidæ. Oss. M.
To be used thrice daily.

*Feculum.* Dr. GEORGE H. BIXBY, of Boston, has recommended starch injections in vaginal inflammation. (*Jour. Gyn. Soc., Boston*, vol. V.) His formula is:

208. ℞. Thin boiled starch, ½ pint.
Pulv. chlorate of potash, 1 teaspoonful.
Glycerine, 4 " M.
Use, by injection, every night, or twice daily.

*Ferri Chloridi Tinctura*, ℥j. to a pint of water, forms an excellent astringent injection.

*Glycerina*, as dilute solution, as an addition to other medicaments, exerts an excellent effect. It increases the discharge, but relieves congestion.

*Granati Radicis Cortex.* The decoction of the root-bark (℥ij., aquæ Oij., boiled to Oj.) is a useful vaginal injection, combined with alum:

209. ℞. Aluminis, ℥j.
Decocti granati radicis corticis, Oj. M.

*Hydrargyri Chloridum Corrosivum.* Dr. DEWEES employed the following solution as a vaginal injection in obstinate leucorrhœas:

210. ℞. Hydrargyri chloridi corrosivi, gr. j.
Aquæ, f.℥ij. M.

It should be used with great caution, as, even at this strength, it may act most painfully on the surface. Milder means are safer. His directions are that it is to be used only in chronic cases; given at first only once a day, then several times a day, until heat and irritation occur, when lotions of acetate of lead will effect the cure.

*Iodinium.* Dr. TILT gives:

211. ℞. Tinct. iodinii,
Tinct. opii, āā f.℥ ij. M.
Two or three teaspoonfuls to be added to a pint of water, to be used once or twice a day.

*Iodoform.* Tampons smeared with iodoform are often valuable in inflammatory affections of the vagina. Oil of fennel or Peruvian balsam will help to mask the odor. In leucorrhœa 3 j. of iodoform to ℥ j. of tannic acid may be applied in a dry state. (BARTHOLOW.)

*Matico.* The infusion has been injected with benefit.

*Plumbi Acetas.* The following is a useful vaginal injection:

212. ℞. Plumbi acetatis, gr. vj.
Aquæ, f.℥ j. M.

*Plumbi Subacctas* is preferred by Dr. TANNER in the following solution, the whole of which is to be used twice a day:

213. ℞. Liquoris plumbi subacetatis, f.℥ ij.
Aquæ, Oj. M.

*Potassii Chloras.* The following vaginal injection has been employed with success:

214. ℞. Potassii chloratis, ℥ j.
Aquæ distillatæ, f.℥ viij. M.

*Potassii Permanganas*, in dilute solution (gr. v. to aquæ f. ℥ j.) is undoubtedly very beneficial in many cases, especially where the discharge is fœtid. An objection to it is that it stains the linen.

*Pulsatilla.* 3 j. of the tincture to Oj. of water, is recommended by PHILLIPS for a daily enema in obstinate leucorrhœas.

*Quercus Alba.* The decoction, with or without alum, is a safe and effective vaginal injection.

*Quiniæ Sulphas*, in solution, gr. x–xxx. to aquæ ℥ j., is often a very efficient application in acute cases.

*Sodii Boras.* Dr. GRAILY HEWITT, of London, advises, when the discharge is acrid, frequent ablutions of the external parts with a borax lotion, to prevent irritation. ATTHILL believes that it is both astringent and tonic. The usual strength is 3 j. to water Oj.

*Sodii Carbonas.* Dr. S. ASHWELL states that repeated experiments have shown that inflammation of mucous membranes always engenders a free acid on their surface, and that to neutralize this he and others have obtained almost immediate relief by the use of an alkali. (*Diseases of Women, p.* 157.) He recommends:

215. ℞. Sodii carbonas, ℈j.–℥j.
Aquæ, ♎j. M.
For a vaginal injection in leucorrhœa.

*Tannin.* This is one of the most popular substances for astringent injections. The amount required is ʒss.–j. in a pint of cold water. Glycerine may be added.

*Thea.* An infusion of green tea makes a good injection.

*Tormentilla.* The decoction (ʒij. aquæ ♎iss, boiled to ♎j.) is an excellent vehicle for alum, in vaginal injection.

**Zinci Acetas.* This salt forms a useful vaginal injection, in the strength of gr. ij.–iv. to aquæ f. ℥j. The following was a favorite formula with Sir ASTLEY COOPER:

216. ℞. Zinci sulphatis, gr. vj.
Liquoris plumbi subacetatis. ♏xxx.
Aquæ, f.℥iv. M.

By this formula decomposition takes place, the acetate of zinc resulting.

*Zinci Oxidum.* The following vaginal injection has been given with success:

217. ℞. Zinci oxidi, ℥ss.
Aquæ, ♎ij. M.

*Zinci Sulphas*, gr. j. to water f. ℥j., is beneficial where the inflammation is slight.

*Zinci Sulpho-Carbolas*, gr. v. to aquæ ℥j., as an injection, is said by J. MATTHEWS DUNCAN to be an excellent remedy in the chronic forms; each injection should be of about ten ounces.

## OTHER LOCAL MEASURES.

*Poultices.* M. FOURNIER, of the Lourcine Hospital, Paris, makes use of voluminous cataplasms which quite dis-

tend the vagina; and he states that he was first induced to resort to this practice by having observed the effects which had several times resulted from his pupils having forgotten to remove large wadding plugs that had been introduced. In each instance, these, so far from having acted prejudicially, had proved of service in treating vaginitis.

### VAGINAL TAMPONS. (See page .)

*Cotton.* This is a convenient substance for introducing local medication into the vagina. Any of the ordinary medicated cotton can be used.

*Marine Lint* has been extolled by Dr. A. J. C. SKENE as one of the most excellent materials for a tampon in vaginitis. The tar which it contains acts antiseptically, and is also a very efficient agent in inflammations of mucous membranes generally.

*Hot-water Vaginal Douche.*—This not unfrequently fails to effect good results owing to ignorance or negligence in the details of applying it. The following rules are laid down by Dr. E. C. DUDLEY, of Chicago, for its administration. (*Chicago Medical Gazette*, 1880):

1. It should invariably be given with the patient lying on the back, with the shoulders low, the knees drawn up and the hips elevated on a bed-pan, so that the outlet of the vagina may be above every part of it. Then the vagina will be kept continually overflowing while the douche is being given.

2. It should be given at least twice every day, morning and evening, and generally the length of each application should not be less than twenty minutes.

3. The temperature should be as high as the patient can endure without distress. It may be increased from day to day, from 100° or 105° to 115° or 120° Fahr.

4. Its use, in the majority of cases, should be continued for months, at least, and sometimes for two or three years. Perseverance is of prime importance.

The sitting posture is especially objectionable, for another reason. It favors pelvic congestion by force of gravity, while the dorsal position utilizes this force during the application of the douche

A satisfactory substitute for the bed-pan may be made as follows: Place two chairs at the side of an ordinary bed, with space enough between them to admit the lower bucket; place a large pillow at the extreme side of the bed nearest the chairs, spread an ordinary rubber sheet over the pillow, so that one end of the sheet may fall into the bucket below, in the form of a trough The douche may then be given with the patient's hips resting on the pillow and with one foot on each chair; the water will then find its way along the rubber trough into the bucket below.

## VAGINAL SUPPOSITORIES.

***Medicated Pessaries.*** Usually the patient herself is directed to insert these, placing them in the vagina as far as the finger can reach. The vehicle employed is generally cocoa-butter. The following is a table of the average strength:

### *Sedative Suppositories.*

| | | |
|---|---|---|
| Atropine, | | gr. $\frac{1}{20}$. |
| Belladonna, (alc. extract, | | gr. ij. |
| Opium, | | gr. ij. |
| Morphia, | | gr. ss. |

### *Cicatrizing and Emollient.*

| | | |
|---|---|---|
| Bismuth oxide, | | gr. xv. |
| Borax, | | gr. xv. |
| Zinc oxide, | | gr. xv. |

### *Astringent.*

| | | |
|---|---|---|
| Alum, | | gr. xv. |
| Alum and iron, | | gr. x. |
| Alum and catechu, | āā | gr. xv. |
| Acetate of lead, | | gr. viij. |
| Acetate of lead and opium, | | gr. v., of opium gr. ij. |
| Tannin, | | gr. x. |
| Matico, | | gr. x. |
| Gallic acid, | | gr. x. |

### *Hæmostatic.*

| | |
|---|---|
| Perchloride of iron, | gr. v. |
| Persulphate of iron, | gr. v. |

*Caustic.*

| | |
|---|---|
| Persulphate of zinc (dried,) | gr. x. |

*Antacid.*

| | |
|---|---|
| Carbonate of soda, | gr. xv. |

*Disinfectant.*

| | |
|---|---|
| Carbolic acid, | gr. v. |

*Alterative and Resolvent.*

| | |
|---|---|
| Iodide of lead, | gr. v. |
| Iodide of lead with atropine, | gr. v., atrop. gr. $\frac{1}{10}$. |
| Iodide of potassium, | gr. x. |
| Bromide of potassium, | gr. x. |
| Mercurial, (ung. hydarg.,) | gr. xxx. |

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## VAGINITIS (SPECIFIC, GONORRHŒAL.)

In the gonorrhœal form of vaginitis, the treatment recommended by

J. T. DARBY, M. D., OF NEW YORK,

Is almost exclusively local. (*Archives of Clin. Surgery*, June, 1878.) Internal remedies are of no efficacy. The only proper treatment is a local one, and general treatment is only beneficial for the constitutional symptoms, or to make the urine less acrid and irritating, to relieve the pain in micturition. Alkalies given by the mouth answer the latter indication.

In a severe case of the disease, absolute rest, elevation of the hips, and the use of some local remedies, will assuage the pain and inflammation. The only medicines to be administered internally are to prevent the burning in the urethral tract. Dr. D. discards entirely copaiba, turpentine, and the like, as they do no good, while on the contrary they do harm by disturbing the digestion.

Lotions applied to the part itself act as a sedative, of which lead lotion is the best where there is a good deal of inflammation without very much suppuration. Direct the patient to sit over a vessel, and then by means of a fountain syringe inject the parts well. The continuous application of *cold* is sometimes very beneficial. If the bowels are constipated, give a laxative to cause a free action; common Epsom salts or seidlitz powder will do very well. We do not wish to cause a diarrhœa, but simply to produce a few active movements so as to help remove the congestion.

The diet should be regulated so as not to be too stimulating. Rice and milk with stale bread may constitute the food until the fever has abated. If the fever runs high, we may give tincture of aconite, or the tincture of *gelsemium sempervirens*. This latter is one of the best remedies for the purpose in this disease. This agent has no specific influence on the disease, but it simply reduces the constitutional disturbance produced by a local cause.

Sometimes the discharge is very profuse. In such a case, use warm water for the injections instead of cold. Where suppuration is abundant, the warm injections act better, and, moreover, they are much more comfortable to the patient. In addition to the warm water injections, astringents may be used, such as acetate of lead or tannic acid. Opium may be combined with these remedies, as it tends to relieve the smarting they produce, and prevents pain by its direct action.

Another remedy of considerable efficacy is *chlorate of potassa*. This may be used alone or in combination with the bromide of potassium. A very good prescription is the following:

| | | | | |
|---|---|---|---|---|
| 218. | ℞. | Potass. chlorat., | | |
| | | Potass. bromid., | āā | ℥ ss. |
| | | Aluminis, | | ℥ j. |
| | | Aquæ fervent., | | O ij. M. |

This is one of the best remedies to alleviate the pain and stop the discharge.

### JOHN MORRIS, M. D., OF BALTIMORE.

This writer (*Virginia Med. Monthly*, August, 1878,) also believes that local remedies are chiefly to be relied on, though he has found *cubebs*, administered internally, to prove very serviceable, particularly if the urethra or bladder is involved. Cubebs exercise a specific effect on the mucous surfaces, even when taken into the general circulation. He has, therefore, used this drug with advantage in both leucorrhœa and specific vaginitis. The old-fashioned injection of *sulphate of zinc* acts very well in mild attacks, if supplemented by frequent injections of cold water. When the urethra or rectum is the seat of the inflammation, *nitrate of silver* is our most potent agent. When the disease creeps into the cervix uteri, internal injections of nitrate of silver and glycerine are our best means of cure. These cases are very intractable, and peculiarly painful when the fallopian tubes and ovaries are included in the inflammatory process. Months, even years, are required ofttimes to effect a cure. In some cases, indeed, the disease is incurable, and remains as a lifelong affliction. When gonorrhœa attacks the rectum, it is not only painful, but troublesome. Many weeks are required to effect a cure. It seems to exercise the same kind of virulence in this locality that it manifests when it attacks the conjunctiva, though, of course, the after-consequences are not so serious.

### DR. GAUDRIOT, OF PARIS.

| | | | | |
|---|---|---|---|---|
| 219. | ℞. | Zinci chloridi liquoris (Fr. codex,) | | gtt. v. |
| | | Morphiæ sulphatis, | | gr. ss. |
| | | Mucilaginis, | | |
| | | Pulv. sacchari albi, | | |
| | | Feculi, | āā q. s. | M. |

Make one suppository. To be introduced into the vagina and retained by a bandage. The vaginal secretions dissolve the suppository, and the active agents are brought into contact with the membrane.

LAWSON TAIT, F. R. C. S., BIRMINGHAM.

Acute gonorrhœal cervicitis or endo-cervicitis, is full of anxiety, for the disease may spread up the uterus and along the tubes to the ovaries. The patient must be kept rigidly in bed, and be treated by soluble pessaries of acetate of lead and opium, and general antiphlogistic remedies. On no consideration whatever should injections be employed in such a case, either vaginal or intra-uterine.

Gonorrhœal acute ovaritis is a common result of the injection. There is agonizing pelvic pain, generally on one side, and all the signs of a severe inflammatory attack. Micturition and defecation are often accompanied with excruciating pain. By administering an anæsthetic, a vaginal examination will reveal the enlarged ovary. The treatment should consist in leeches to the perinæum, a blister over the ovaries, diuretics, and small, frequent doses of opium. The rectum should be well evacuated by an enema, and the bowels kept quiet for a few days.

In cases of fading gonorrhœa, it is very common to find that pressure on the trigone gives a good deal of pain, and that the urine is alkaline and purulent. Injection of the bladder, in these cases, with weak solutions of carbolic acid or neutral acetate of lead, will very rapidly effect a cure.

In acute *gonorrhœal urethritis*, no application is so good as a morphia pessary; the chronic form, which is often left after the acute stage has passed, is very easily cured by the application of equal parts of carbolic acid and glycerine on a probe armed with cotton-wool.

DR. MONTROSE A. PALLEN.

This writer observes (*Gaillard's Medical Journal*, December, 1879,) that the treatment of gonorrhœa in women is not the simple matter one would be led to suppose, upon reading the descriptions given in the majority of books. Injections prescribed, such as the zinc, alum, copper, and silver salts, are very slow, as well as inefficient in their work. The virus not only invades the genital folds of the vulva, but likewise the urethra,

vagina, cervix-uteri, and even the uterine cavity and oviducts. He knows of nothing comparable to the excessive use of *hot-water douching*, in the initial symptoms of the disease, as the retention of the acrid virus in the folds of the vagina is apt to beget erosions of the mucous surfaces, which rapidly undergo ulceration. Any method to prevent friction of the vaginal walls is beneficial, and as the *common yellow clay*, found in Pennsylvania, Missouri, and other states, is a most admirable antiseptic, as well as very soothing to inflamed surfaces, his practice is to thoroughly irrigate the vagina with hot carbolized water, place the patient in the knee-chest position, retract the perinæum with the Sims speculum, and after the vagina is ballooned by atmospheric pressure, to thoroughly dry the surfaces with cotton, then paint them with a saturated solution of nitrate of silver, followed by a solution of common salt, to make an insoluble silver chloride, to prevent too much cauterization, then to dry the surfaces once more with cotton, and then fill the vagina with dry powdered clay, or a magma of clay, vaseline, and thymol. The clay is not only an antiseptic, but it protects the mucous surfaces from attrition, and is at the same time a pessary-mould, on which the uterus rests. Besides these advantages, it absorbs all of the gonorrhœal discharge, and keeps the genital tract clean and free from smell. Twenty-four hours subsequently, the patient can wash everything out of the vagina by means of the hot-water douche, and the nitrate of silver, etc., may be re-applied.

M. VIDAL, of Paris, uses *gurjun balsam*, locally, the vagina being first washed out with warm water, a plug of cotton-wool, soaked in a liniment of equal parts of balsam and lime-water, is applied by means of the speculum, and the plug is then covered with a second one of dry wool.

JOSEPH MULREANY, F. R. C. S., ENGLAND.

*Gonorrhœal Metritis.* Where the gonorrheal inflammation extends to the uterus, bringing on the complication of specific metritis, this writer (*Half-Yearly Compendium*, vol. VIII.,) pre-

scribes at the outset, dry heat to the abdomen, and internally, a combination of the alkaline carbonates, iodide of potassium, and opium, in large and repeated doses, such as in the following formula:

| | | |
|---|---|---|
| 220. ℞. | Pulv. potass. bicarb., | ʒ ij. ad ʒ iij. |
| | Pulv. potass. nitratis, | ʒ ij. ad ʒ iss. |
| | Sp. ammon. aromat., | f. ʒ vj. ad f. ʒ j. |
| | Potassii iodidi, | ʒ ss. ad ʒ j. |
| | Syrupi zingiberis, | f. ʒ j. |
| | Aq. pur., | ad f. ʒ vj. M. |

A tablespoonful to be taken every one, two, or three hours, during the urgency of the symptoms.

Sometimes he gives a dose of calomel, gr. v. ad gr. x., if there is a bilious taint either of skin or breath. Rarely are leeches necessary; and at this stage he never uses injections. Within a few hours marked relief is obtained. The opium dominates the pain, and frees the system from its depressing influence: and the beneficial action of the alkalies on the blood, in this, as in many acute inflammatory affections, is most marked. He gives no alcoholic stimulants, and restricts the patient to a purely milk diet.

The above treatment requires very little alteration in most cases, till a cure is effected. Another point in this plan is that the bowels are kept quiet. If they do not act for three or four days, so much the better, as by that means the inflamed and enlarged uterus is neither pinched nor disturbed by excessive peristaltic movement; they of themselves, however, act about the fourth day; but if they do not, a dose of sod. et potass. tart. and rhubarb is sufficient to effect that object.

# VAGINISMUS AND DYSPAREUNIA.

This common and distressing affection is frequently a neurosis, without visible cause; but it is also, at times, owing to herpes, vaginal fissure, hypertrophied and painful papillæ, mucous patches, or disease of the urethra. These various conditions require appropriate treatment.

PROF. J. MATTHEWS DUNCAN, M. D., LONDON.

In simple, pure neurotic cases of vaginismus, there is no treatment which is of decided use. Enlargement or distension of the vaginal orifice only slightly, or not at all, modifies the disease. Even the distension caused by childbirth has no good effect. In a bad case of this kind there is no absence of the disease when sexual relations are resumed. Cutting of the pudic nerve might be tried, but has been performed without benefit. Cutting away the sensitive parts is useless; alleged cures from this proceeding are misinterpretations.

In instances occurring soon after marriage, there can often be discovered a painful red spot at the fourchette, and occasionally also a fissure there, or near there. Time and rest are all that are required in these cases, the rest meaning a separation of the married parties. If prolonged, childbirth will cure these cases.

Another frequent cause in newly-married women is *vaginitis*, either acute or chronic. The treatment appropriate to these inflammatory conditions will, when successful, also remove the painful spasm.

Another not uncommon local cause, and one apt to be overlooked, is the presence of one or more little ulcerations, situated around the orifice of the vagina beyond the hymen. They are intensely tender and sensitive, and are probably allied to eczema or lupus. They should be removed either with the knife or the cautery; but the success attending these operations has not usually been of a kind to boast of.

## DR. H. HILDEBRANDT, OF KÖNIGSBERG.*

Professor Hildebrandt condemns the treatment of vaginismus by forcible dilatation, whether under anæsthetics or not. The course he directs is to begin by a removal of any local cause of the reflex spasms, and then to proceed to methodical *gradual* dilatation.

These local causes may be as follows:

*Local inflammatory affections*, as eczematous, or erythematous conditions of the introitus vaginæ; inflamed carunculæ myrtiformes; sensitive cicatrices of the hymen; urethritis, etc. These may generally be removed by fomentation with warm lead-water, by touching with nitrate of silver or tincture of iodine, or by removing painful cicatrices or carunculæ with the knife or scissors.

*Affections of the uterus or ovaries*, especially forms of chronic inflammation of those organs. These, at times, lead to reflex spasms of the muscular floor of the pelvis. They must receive appropriate treatment before we can hope to cure the vaginismus.

The *dilatation* should be begun only after the above local causes have received attention. At first only small specula should be employed. When coition begins, it is important to instruct the husband to be moderate and careful; and the fear of the act on the part of the woman should be allayed by assurances that there is no danger of the suffering returning.

In all cases the following, introduced every evening, will be well to try:

| | | | |
|---|---|---|---|
| 221. ℞. | Butyri cacao, | 4 grammes. | |
| | Potassii bromidi, | 50 centigrammes. | |
| | Belladonnæ extracti, | 30 " | |
| | Acidi thymici, | 5 " | M. |

For a vaginal suppository.

He believes the medical treatment alone is generally sufficient to effect a cure. The parts should be carefully examined for any fissure or ulceration. If present, they are to be cauterized

* Part VIII. of Billroth, *Handbuch der Frauenkrankheiten.*

with nitrate of silver, tincture of iodine, or powdered with iodoform. Dilatation, either gradual or forced, may be necessary, but our author believes that this is very rarely the case. Nearly all such patients require, in addition to the local treatment, such general tonic measures as iron, quinine, mineral waters and massage.

F. WEBER, M. D., OF ST. PETERSBURG,

Has found (*Allg. Med. Zeitung*, January, 1878,) that the most common causes of the affection, he thinks, are a rigid condition of the hymen, gonorrhœal or catarrhal inflammation of the vagina, and also cicatrices, ulceration or excoriation of the vulva and outer parts of the vagina.

Organic contraction should be treated by methodical dilatation, at first with compressed sponge, and subsequently with Ferguson's specula, the size of which should be gradually increased. An ointment of *belladonna* is of great service at the same time. Inflammation of the vagina should be treated with cloths wet with a solution of sugar of lead, injections with or without opium, and belladonna suppositories. In the latter stages, cauterization, with a solution of nitrate of silver, gives excellent results. This is especially serviceable when there are excoriations. Warm hip-baths lessen the irritability of the nerves, and are of service. In addition to the local treatment, tonics and nervines should be used—especially bromide of potassium, iron and valerian. When no local trouble is to be found, and the sufferings of the patient are very severe, division of the nervus pudendus, as recommended by SIMPSON and SIMS, should be practiced. The removal of the hymen itself or the myrtiform caruncle, WEBER has never found necessary, though it has been repeatedly done by SIMS and others.

M. T. GALLARD, M. D., OF PARIS,

Recommends, where there is redness or excoriation of the mucous membrane, an iodoform ointment, as:

| | | | | |
|---|---|---|---|---|
| 222. ℞ . | Iodoformi, | | | |
| | Ol. theobromæ, | āā | ʒss. | . |
| | Axungiæ recentis, | | ʒiv. | M. |

If there is only pain, without any apparent alteration of the mucous membrane, he prescribes:

| | | | | |
|---|---|---|---|---|
| 223. ℞. | Ext. belladonnæ, | | gr. xlv. | |
| | Axungiæ recentis, | āā | gr. xlv. | M. |

In either case, he directs to be made plugs of charpie, as small as they choose to commence with; and in order not to frighten the patient, he charges her with the making of them, instructing her to count the threads which enter into each of these plugs, to be introduced into the vagina each night, after being anointed with one or the other of the two ointments mentioned above. If at first she uses the iodoform, she will be able, after a few days, to replace it by the belladonna, when the redness or excoriation, or the eruption of the vulvar region, has disappeared. Only, in either case, care must be taken to increase each day, by an imperceptible amount, but previously determined, the number of threads employed—ten, twelve, or fifteen, for example. So we shall secure, after a time, which which will never be very long, the use of a plug of such size as that, after having removed it, the place may be supplied by the virile member without the substitution causing any pain. He attributes the cure in these cases chiefly to the narcotic action of the unguents applied, though not denying that there may be advantage in the mechanical effect of the dilatation also.

He utterly condemns all use of the knife in such cases, unless, possibly, when the carunculæ myrtiformes are inflamed, swollen, or ulcerated, when he would sometimes admit the ablation of these as a more speedy mode of cure than treatment by caustic only.

### DR. EUGENE BOUCHUT, PARIS.

| | | | | |
|---|---|---|---|---|
| 224. ℞. | Extracti krameriæ, | | ℈ ss. | |
| | Butyri cacoæ, | | ℈ j. | M. |

Make twelve suppositories. One to be introduced into the vagina night and morning. Valuable where there is vaginal fissure.

PROFESSOR CARL SCHROEDER.

Bathe the external genitals cautiously with dilute lead-water, and afterward, when the redness has subsided, pencil the sensitive parts with:

225. ℞. Argenti nitratis, ʒ ijss.
Aquæ destillatæ, f.ʒ j. M.

Or with:

226. ℞. Acidi carbolici, gr. x.
Aquæ, f.ʒ j. M.

This was also the treatment preferred by Prof. SCANZONI, and in many instances it is entirely successful, and dispenses with the severe surgical measures introduced by SIMPSON, SIMS, and others.

W. H. BYFORD, M. D., CHICAGO.

This writer treats vaginismus by applying the solid nitrate of silver to the vulva every ten or fourteen days, and in the interval, glycerine and tannin. The first application reduces the sensitiveness decidedly, and it becomes less after each successive touch until finally cured. Rational general treatment should always accompany this local one.

Mr. I. BAKER BROWN has noted that hyperæsthesia of the vagina is occasionally dependent on diseases of the *rectum*, especially fissure, and disappears when this condition is removed. (*Surg. Dis. of Women.*)

As parturition would almost certainly relieve this condition, a simple and sure cure could be effected by fertile coition, carried out when the patient was thoroughly under the influence of ether.

RÉSUMÉ OF REMEDIES.

*Acidum Carbolicum.* (See F. 226.)
*Argenti Nitras*, locally applied. (F. 225.)
*Atropia.* Dr. PEASLEE recommends:

227. ℞. Atropiæ, gr. ij.
Adipis, ℥j. M.
For local use.

*Belladonna* is useful at times. (F. 221.)

*Ice.* The application of finger-shaped pieces of ice in the vagina is recommended by HOLST.

*Iodoformum* is praised by LEBLOND and others. It may be given in suppositories, each containing gr. x.

*Krameria* has been employed by BOUCHUT. (F. 224.)

*Opium.* A full dose of opium, or a hypodermic injection of morphia, will sometimes relax the spasm of the constrictor muscle, and relieve the symptoms. (FONNSAGRIVES.)

*Plumbum.* Goulard's extract is often exceedingly soothing.

*Stramonium* is occasionally beneficial.

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# VAGINAL GROWTHS.

The vegetations and warts which form on the labia may be removed by the knife or scissors. Dr. E. J. TILT uses the latter, and touches the seat of growth with acid nitrate of mercury. The application to them of crystallized acetic acid is said to remove them without pain.

For *caruncle of the urethra*, Dr. WM. GOODELL recommends the actual cautery, as a red-hot knitting needle. The after-treatment is the application twice a week of the undiluted commercial carbolic acid, which will prevent a crop of small growths springing up around the site of the parent growth. When the patient will not submit to the knife or the cautery, the next best procedure is to touch the growth twice a week with crystallized carbolic acid made fluid by heat.

Dr. A. W. EDIS recommends (*Brit. Med. Jour.*, April, 1874,) a saturated solution of *chromic acid* in these growths, applied as

above mentioned for carbolic acid, and afterwards neutralized by pledgets of lint dipped in a strong solution of sodium carbonate.

For non-syphilitic warts and papilomatous growths of the vulva and parts adjacent, Dr. HENRY G. PIFFARD, of New York, (note to PHILLIPS' *Materia Medica*,) has used with the utmost satisfaction a strong tincture of the *arbor vitæ*, *Thuja occidentalis*, applied to the part three times a day for a week or fortnight.

Dr. GRAILY HEWITT suggests the use of strong nitric acid or lunar caustic. Black wash, or a strong solution of iodide of potassium, should then be applied.

Dr. G. S. BEDFORD removes these excrescences, or when small, sprinkles them once a day with:

228. ℞. Cupri acetatis,
Sabinæ, āā gr. vj. M.

Dr. F. J. BUMSTEAD removes these growths, or, when quite small, touches them with glacial acetic acid, or fuming nitric acid; as the eschar falls, repeating as may be necessary. In obstinate cases, he employs a solution of chromic acid 100 grains to the ounce. Or, corrosive sublimate in collodion ʒj. to f. ʒj., may be applied over the whole surface. The perchloride or subsulphate of iron often proves useful, applying it once or twice a day to the growth, which shrivels and falls, and a few applications will prevent its return.

Where vegetations are flat and horny, ZEISSL gives:

229. ℞. Acidi arseniosi, gr. ij.
Ung. hydrarg., ʒj. M.

Or,

230. ℞. Arsenici iodidi, gr. ij.
Ung. hydrarg., ʒj. M.

Dr. PETERS, of Prague, has found the simple application of cold poultices to cause these growths to disappear, after they had resisted cauterization and even excision.

*Vulvo-Vaginal Cysts.* The glands of Bartholin are at times liable to become encysted, and lead to the formation of small tumors, often painful. Their contents may be withdrawn, but to prevent them from refilling Dr. E. DUVEMOZ recommends that they be injected with about six drops of a ten per cent. solution of chloride of zinc. (*Annales de Gynecologie*, April, 1880.)

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## PRURITUS VULVÆ SEU VAGINÆ, AND VULVITIS.

The most common causes of itching of the vulva are pediculi, irritating vaginal leucorrhœa, dilatation of the lymphatic vessels, eczema, erythema, diabetes, pregnancy, vesical calculus, herpes tonsurans, abnormal growths, cervical endometritis, the presence of small bristly hairs on the vulva, seat worms, leptothrix vaginalis and simple nervous pruritus. It is generally symptomatic. In all cases the treatment, when practicable, should be with reference to the causation in the particular case.

### PROFESSOR CARL SCHROEDER.

Of actual curative agents, this writer (*Ziemssen's Cyclopædia*) can only speak speak with confidence of:

| | | | | |
|---|---|---|---|---|
| 231. ℞. | Acidi carbolici, | | gtt. iv.–l. | |
| | Glycerinæ, | | | |
| | Aquæ, | āā | f.ʒ ss. | M. |

Apply locally.

He says of this combination: "I am sure that whoever has once tried this, will never return to any of the other remedies which have been recommended."

### A. C. GARRATT, M. D., BOSTON.

| | | | |
|---|---|---|---|
| 232. ℞. | Acidi hydrocyanici (Scheele's,) | f.ʒ ij. | |
| | Liquoris plumbi subacetatis, | f.ʒ iv. | |
| | Aquæ, | f.ʒ iij. | M. |

As a local application.

Dr. HORATIO R. STORER, of Newport, R. I., states that he has long given great comfort in this affection by Oldham's ointment of hydrocyanic acid and acetate of lead, with cocoa butter.

Dr. G. S. JONES, of Boston, has employed with benefit, in pruritus of the vulva, the following:

| | | | |
|---|---|---|---|
| 233. R. | Sodii biboratis, | ℥j. | |
| | Camphoræ, | ℥j. | |
| | Olei gaultheriæ, | gtt. xxx. | |
| | Aquæ bullientis, | Oij. | M. |

When cool, pass through a cloth. To be used cold, as a wash for the parts, and as an injection into the vagina.

For pruritus, produced by irritating leucorrhœal discharges, Dr. A. R. JACKSON, of Chicago, has used, with gratifying results, the following:

| | | | |
|---|---|---|---|
| 234. R. | Zinci sulpho-carbolatis, | ℥ ss. | |
| | Aquæ, | f. ℥ viij. | M. |

Wash the parts twice daily, leaving it to dry upon the surface.

## PROF. MONTROSE A. PALLEN, M. D., NEW YORK.

This gynecologist has found pruritus pudendalis in pregnancy to yield in nearly every instance, except when it depends on trophic neuric causes, to the application of *thymolized clay.*

| | | |
|---|---|---|
| 235. R. | Thymol, | gr. xv. |
| | Vaseline, | gr. xxx. |
| | Powdered brick clay, | ℥ iij. |

Dissolve the thymol in the vaseline, and rub it up with the clay.

This is introduced into the vagina or applied to the pruritic parts, to be washed out every day or two and replaced. Herpes, eczema, and kindred affections, so often encountered in the later months of gestation, are similarly benefited by this antisepsis, more particularly if produced by the acrid discharges from the cervix and vagina. (*Richmond and Louisville Med. Journal*, 1878.)

In diabetic cases, Professor WINCKEL (*Practitioner*, Septem-

ber, 1876,) states that by the administration of Carlsbad salts internally, and a salicylic acid lotion externally, he can generally effect a cure.

Dr. B. HICKS (*Lancet*, vol. I., 1877, p. 456,) has made some good observations upon the same subject, and also on the very frequent association of eczema with diabetes. *Codeia* has proved most valuable, in Dr. HICKS' hands, in allaying the irritation. Nothing approaches in value, according to Dr. RICHARD NEAL, of London, a solution of *boracic acid* as a local application. Professor HARDY (*Medical Times and Gazette*, July, 1877, p. 98,) reports on pruriginous and other affections of the genitals in both males and females as symptoms of diabetes. That such symptoms are frequently associated with diabetes is certain. Well-marked instances of pruriginous vulvitis, where no trace of sugar exists in the urine, are, of course, of frequent occurrence.

### DR. ALFRED WILTSHIRE, OF LONDON.

The treatment adopted by this writer is set forth in the *British Med. Journal*, March 5th, 1881:

Attention to cleanliness will often do much to allay irritation, and should always be enjoined. Demulcent washes are preferable to soap, unless carbolic or coal-tar soap be used, and usually even these are inadmissible. Almond-meal, strong bran-water, decoction of rice, marsh-mallow, slippery-elm, or fine oatmeal, are suitable, especially the first, which, if pure, yields, during use, a marked odor of hydrocyanic acid, and appears to soothe materially.

When pruritus is due to acari or pediculi, ointment of sulphur, white precipitate, or staveacre, speedily cures, by destroying the insects and their ova. If nits persist about the pubic hairs, a lotion containing bichloride of mercury and acetic acid will dissolve them. Ascarides are destroyed by a carbolic lotion (1 in 60), but general, rather than local treatment, should be relied upon for their eradication—iron, quinine, cod-liver oil, together with enemata of hamamelis, lime-water, iron, etc.

The vegetable parasites are very efficiently treated by unirritating parasiticides, *e. g.*, borax, boracic acid, sulphurous acid, etc. Most of the favorite remedies for vulvar pruritus are parasiticides.

It is a curious clinical fact that patients are often freed for days from itching, by a single application of a parasiticide, as after the use of a strong borax lotion. It is best to use such remedies in a fluid form, for, when necessary, powerful combinations may thus be made in the unhappily intractable cases. Fatty preparations of drugs do not suit so well for local application as non-fatty, and yet great relief may be afforded by some ointments.

Many cases of pruritus vulvæ are promptly relieved by a *borax lotion*, and it is well to use this simple and efficacious remedy where not contra-indicated. A drachm to five ounces of warm water is a good standard strength, but a stronger solution is usually needed, seldom a weaker. Hydrocyanic acid may be added, say ℥ j. of the dilute acid to ℥ x., or morphia (gr. ij.,) atropia (gr. ss), aconitia (gr. ss.,) or veratria (gr. ss.) Infusion of tobacco (half an ounce to the pint) alone relieves some cases, and forms a good vehicle for borax or boracic acid. It is not well to use glycerine with the borax, as a rule, as it is apt, owing to its affinity for water, to aggravate the irritation. Some find relief from chloral lotions, but the drug has not always suited. Strong decoction of poppy is a soothing vehicle for borax, etc. Ice alone will relieve some, while others can get relief only from the use of very hot water.

*Boracic acid* is an excellent remedy, but, being much less soluble in water than borax, it is not so handy as a lotion. It may be combined with hydrocyanic acid, morphia, atropia, aconitia, veratria, etc. In the form of ointment, where fats do not disagree, it often soothes greatly. A non-rancid fat should alone be employed as the vehicle, *e. g.*, freshly-made spermaceti cerate, vaseline, fossiline, or purified benzoated lard, etc.

Lotions of *iodine* occasionally answer, *e. g.*, two drachms of

iodine in ten ounces of elder-flower water. Electricity may afford relief in neurosal cases.

In simple vulvitis, lead, borax, or carbolic lotions relieve. An ointment of calomel or bismuth is also good. Malignant affections of the parts call for appropriate treatment, such as ablation, where practicable, but sedative applications (conium, opium, belladonna,) alone are often all that we can employ.

Urethral caruncles should be removed, and urethritis, gonorrhœal, or other, treated *in loco*. Cystitis, stone, and kindred vesical affections and renal diseases, must be treated according to their several indications. Success is unattainable if they be overlooked. Vaginitis, gonorrhœal or otherwise, demands thorough treatment. The packing of the upper part of the vagina with a tampon soaked in glycerine, with carbolic acid, lead, tannin, chloride of zinc, or borax, seems the most prompt method of cure, but the injections of these agents may suffice, and may be preferable. When the itching is associated with chronic metritis, iodized tampons are useful, and so are copious irrigations of the parts with warm water.

When vulvar irritation arises from acrid discharges proceeding from the uterine cervix or cavity, the use of a tampon filling the top of the vagina is most efficient. Cotton-wool, iodized or carbolized, answers well. As glycerine is apt to excite a watery flux, it is not always admissible, but may now and then be required. Absorbent wool, dusted with iodoform, boracic acid, morphia, tannin, camphor, chloral, and such like, may be packed against the cervix uteri, so as to arrest and disinfect virulent discharges; the choice of drug being guided by the form of disease present. It is necessary to attach a string to each tampon to facilitate its withdrawal. Vaginal and pudendal pruritus, arising from acrid uterine discharge, is mostly seen in elderly women, and may be accompanied merely by glazy redness around the ostium vaginæ. Search for uterine discharge may, therefore, be necessary.

Local treatment by the tampon may be demanded in malignant disease in the uterus, and also in fibroids and polypi when

accompanied by irritating discharge, *e. g.*, in disintegrating calcified growths. Removal of the diseased structures is preferable where practicable; and the same may be said of cases dependent upon ovarian growths. Urticarious itching is the form of pudendal irritation mostly seen in association with ovarian tumors. A lotion of bicarbonate of soda, or one of borax with hydrocyanic acid, generally relieves. Magnesia internally is useful. When there is previous turgescence of the vessels of the part, as may be seen from stasis in some pelvic effusions, relief is afforded by the watery flux provoked by the presence of a well-soaked glycerine tampon; and a mercurial and saline purge is helpful when portal congestion is present. Eczema, often symptomatic of glycosuria, may be very obstinate. Dusting freely with fine oxide of zinc answers well when ichorous weeping is abundant. If fissure be present, a poultice formed of the clot resulting from the addition of two drachms of liquor plumbi to ten ounces of new milk is most useful. Sometimes calomel ointment will alone relieve, as in certain instances of anal mischief; or bismuth may answer, dry or otherwise. Mercurial ointment suits certain cases excellently.

Angry ecthymatous spots appear to yield only to calomel, either dry or in the form of ointment or of black wash. Opium is a valuable adjunct, both internally as well as externally.

Herpetic eruptions are benefited by a small mercurial dose followed by a saline purge, as the effervescent sulphate of soda, and the local use of borax lotion. If they be very severe, hydrocyanic acid and other local sedatives may be necessary; but it must be borne in mind that these herpetic manifestations generally run a definite course, the vesicles dying away completely.

Unhappily, we have no cure for confirmed diabetes, but much may be done by judicious treatment and management, alike for those who are threatened with glycosuria, as for advanced cases. Immense comfort may be secured by the habitual use of cleansing ablutions, and of borax or boracic acid.

Gouty diabetics may experience much benefit from a course of the Bath waters and baths, or from those of Carlsbad. The in-

somnia of diabetic pruritus vulvæ sometimes shows a gratifying amenability to *codeia*, in the form of one-grain doses in pill. The bromides are also useful as hypnotics.

The distress that pregnant women sometimes experience, especially towards the latter months, may be terrible. When associated with apthous ulceration, and the oidium albicans is present, nothing relieves more quickly than a lotion of *sulphurous acid*. Some prefer the hyposulphites, and in either case prolonged use is undesirable. As sulphurous acid is very volatile, it is best to mix a tablespoonful of the pharmacopœial solution with a half pint of warm water, barley-water, or almond emulsion, freshly for each occasion. Another very useful lotion is formed by two drachms of bicarbonate of potash in half a pint of water. This should also be injected into the vagina; it checks the discharge, often alkaline, which seems to excite irritation. Borax is again a valuable agent, and so is lead.

In some cases, relief is only obtained after treating the cervix uteri; as when apthous ulceration is seen around the os. Nitrate of silver, lightly used, suffices. Bromide of ammonium internally is highly serviceable. Attention should be paid to the state of the bowels, and to the hepatic and renal secretions, for in many cases elimination is defective. Turkish or hot-air baths exert a better effect over some of these cases than any ordinary treatment; and the same remark applies to certain other varieties of pruritus vulvæ, *e. g.*, those seen in the obese, gouty and (senile) pruriginous. Jaborandi may prove very helpful under similar circumstances, by producing profuse diaphoresis. Diuretics—juniper, broom, potash, lithia, etc.—are often beneficial, as in gouty cases, especially when combined with colchicum. Restrictions as regards meat, beer and wines should be imposed on the subjects of lithiasis.

When vulvar pruritus appears to be part of a general prurigo senilis, besides the local applications already indicated, a lotion of bromide of potassium may afford ease, as has been shown by Dr. Gueneau de Mussy. The same drug given internally is helpful, the affection appearing to be part of a general nervous

erethism. Arsenic exerts a controlling effect in some instances of senile prurigo, as well as in those due, as the French allege, to the dartrous diathesis.

Arsenic may be said to be indicated in the neurosal forms, and especially when there is marked loss of flesh.

In the intractable cases, frequent changes of remedies may be inevitable for the relief of torment. Chloroform locally applied answers occasionally; it may be used in the form of vapor, liniment, ointment, or lotion. Bichloride of mercury, also a parasiticide, gives relief to some in the form of a lotion, but it requires caution in its use. Used in the proportion of gr. j-v. to ℥ viij. of mistura amygdalæ, it may afford great relief.

### DR. L. DE SINETY.

In almost all cases of simple vulvitis, repose, baths and emollient lotions constitute the whole treatment. After the acute stage has passed, slightly astringent lotions, as weak solutions of alum or tannin, are useful. When there is a blenorrhagic complication the inert powders, as oxide of zinc or subnitrate of bismuth, are always grateful. Weak carbolic lotions will hasten the cure, and if long delayed the parts should be painted with a fifteen-per cent. solution of nitrate of silver.

In cases of gangrene, poultices of powdered cinchona, or of oak bark and carbolic acid, are required. Iodoform in powder is also an excellent topical application. In the spontaneous gangrene of the vulva in infants, it has been recommended to cauterize the affected part, and a little beyond, with strong acids, as the hydrochloric.

The *œdema of the vulva*, especially noticed in pregnant women, may be relieved by numerous small punctures, though this plan is not wholly free from the danger of erysipelas. In these cases the urine should always be examined for albumen; and sometimes they may be relieved by maintaining the horizontal position.

DR. H HILDEBRANDT, OF KÖNIGSBERG.*

*Pruritus Vaginæ.* Of prime importance in obstinate cases, is a careful regulation of the life. The diet should be light, principally of vegetables, without stimulants, and the bowels regular. The bed should be cool, and the genitalia frequently washed, but cold sitz-baths are not advantageous. During the night a compress, wet with black wash, should be applied, and during the day the parts should be anointed with equal parts unguentum plumbi and unguentum belladonnæ. Or the following, especially in girls with a tendency to masturbation, will be efficient:

236. ℞. Potassii bromidi, gr. xxx.
Hydrarg chlor. mitis, gr. xlv.
Lupulinæ, gr. xxx.
Olei olivarum, ℥j. M.
For local use.

When the sleep is disturbed by the itching in spite of these applications, BEIGEL strongly recommends a hypodermic dose of morphia; but our author has found decidedly more improvement from twenty or thirty drops of tinct. *cannabis indica* than from any other anodyne.

All these and most other measures fail in not a few obstinate cases. In such the anti-pruritic applications extolled by various authors may be tried, but will often prove of no avail. In these we must have recourse to more decided measures. Of these, Dr. H. has derived signal advantage from two. They are *cauterization with solid nitrate of silver* and the use of the *alum tampon*. He takes a tampon or wedge of wadding and anoints it thoroughly with the following:

237. ℞. Aluminis, ʒij.-iij.
Adipis, ℥j. M.

This is introduced into the vagina and allowed to remain six to twelve hours. It is then withdrawn and the cavity rinsed

* Part VIII. of Billroth's *Handbuch der Frauenkrankheiten.*

out with a mild alum injection. It is a modification of a method recommended by SCANZONI.

Cauterization of the parts is performed by applying the stick freely to the whole upper part of the introitus, drying it with charpie, and counteracting the rather severe pain which generally follows by cold compresses.

*Vulvitis.* The general treatment of inflammations of the vulva involves repose, cleanliness, keeping the parts dry and preventing friction. In acute catarrh of the vulvæ, warm sitz-baths and fomentations with warm lead-water are required. In chronic cases, compresses wet with black wash, painting with nitrate of silver, and the use of lead or zinc ointment are called for.

In certain obstinate cases, especially after gonorrhœal catarrh, the inflammation persists in the glands of Bartholin and in the lacunæ, which, to the number of fifteen or twenty, are found in the vulvar mucous membrane. Close examination will reveal a localized redness at these points. Direct treatment is here required; a pointed pencil of nitrate of silver is to be inserted into these depressions of the mucous membrane and their interior thoroughly stimulated.

In *vulvar folliculitis*, a not uncommon form of vulvitis, appearing on the labia majora and leading to irritation, acne-like pustules, and even to small abscesses, the treatment should begin with warm sitz-baths, followed by warm poultices, the abscesses being opened early when they appear.

*Eczema Vulvæ.* The treatment of acute eczema in its first stage, consists in the application of warm poultices of bruised meal, which usually promptly diminish the burning pain, redness and tenderness of the skin. When these have disappeared the parts may be dusted with:

238. ℞. Zinci oxidi, gr. xxiv.
Amyli pulv., ℥j. M.

When dry crusts have formed and there is no longer a fresh wet secretion, it will usually be sufficient to complete the cure by anointing with:

239. ℞. Hydrarg. præcip. alb., ℥ ij.
Axungiæ, ℥ j. M.
For an ointment.

The patient should be persuaded to keep her bed until the cure is complete, to refrain from scratching the parts, and if the itching is unbearable she should be given an anodyne.

In chronic eczema, the hard crusts should be removed by oiling and warm baths, or, in old cases, by covering the part for half an hour with compresses soaked in a solution of caustic potash, one part to three hundred of water. Following this, the white precipitate ointment should be applied. The tar preparations are also useful in these cases.

### DR. TAUSZKY, OF NEW YORK.

In cases where the pruritus depends upon erythema intertrigo, acne, eczema, or prurigo, produced by vaginitis, or endometritis, this writer (*Medical Record*, September, 1880,) recommends warm injections of flaxseed tea, with a solution of the aqueous extract of opium, together with a sitz-bath, lukewarm, twice daily, for twenty or thirty minutes, and the subsequent irrigation of the vagina by means of a fountain syringe, and the following:

240. ℞. Zinci sulpho-carbolatis, ℥ ss.
Aquæ, ℥ ij. M.
For an injection; to be used every two hours, while the patient lies in a horizontal position, with her hips well raised.

After each vaginal irrigation, a tampon of carbolized or salicylated cotton, with some unguent and belladonna is introduced into the vagina so that it prevents the external parts from being bathed in the secretions, often mucous, sometimes muco-purulent —which cause the excoriations at and around the vulva, the nates, and the inside of the thighs—and directing the patient to use in the evening, and also for one hour in the afternoon, applications of black wash—aqua phagedenica nigra. Where the pruritus or prurigo disturbs the patient's sleep, a hypodermic injection of morphia is given.

The pruritus itself is greatly relieved, besides the above medication, by application of dilute tincture of iron or a twenty per cent. solution of carbolic acid. The most useful of all applications, however, for pruritus vulvæ, is the *balsam of Peru*, of which the following formula is effective:

241. ℞. Pulv. acaciæ, ℥ij.
Balsami Peruviani, ℥j.
Olei amygd. dulc., ℥jss.
Aquæ rosæ, ℥j. M.

Apply freely, with a camel's-hair brush, eight or ten times a day, to the itching part.

This prescription was first suggested by HUFELAND. If the pruritus vulvæ is dependent upon diabetic urine, Dr. T. has found, in addition to the means herewith recommended, the daily internal use of from six to eight drachms of glycerine, in teaspoonful doses, extremely beneficial. If dependent upon granular vaginitis, he is in the habit of touching each granule, after first scraping it off with the curette, with an exceedingly fine point of nitrate of silver.

## DR. L. DE SINETY.

Whatever treatment is adopted, it should be with a due regard to the fact that the complaint is generally sympathetic of some other lesion. The following applications have proved the most useful in Dr. De S.'s practice. He adds that whatever lotion is used, it should be applied *as hot as the patient can bear it.*

### LINIMENTS.

242. ℞. Chloroformi, gtt. xlv.
Olei amygdal. dulc.,
Olei cadini, āā f.℥ vj.
Tinct. opii, gtt. xv. M.

243. ℞. Extracti opii,
Extracti belladonnæ, āā gr. iij.

Dissolve in the smallest quantity of water possible, and add:

Potassii bromidi, ℥j.
Glycerinæ, ℥j. M.

LOTIONS.

244. ℞. Hydrargyri chloridi corrosivi, gr. s.s
Aluminis, ʒ vj.
Glycerinæ, ʒ iij.
Aquæ destillatæ, ℥ x. M.

245. ℞. Morphiæ muriatis, gr. j.
Boracis, ʒ iiss.
Aquæ chloroformatæ (saturat.), ʒ x. M.

Apply locally, several times daily.

In some rebellious cases, a residence at a mildly alkaline and sulphurous spring, will bring about a cure. For those who cannot accomplish this, the following may be used at home:

SULPHURO-ALKALINE BATH.

246. ℞. Polysulphuret of sodium, ʒ ss.
Bicarbonate of sodium, ʒ v.
Water, for a bath. M.

E. J. TILT, M. D., LONDON.

*Eczema Genitale.* Irritation and pruritus of the genitals is not unfrequently owing to an eczematous condition of their surface. This is especially the case in fat women of middle age with gouty antecedents. As lotions or as injections, when the eczema extends to the inner surface of the vagina, the following prescriptions are recommended:

247. ℞. Bismuthi subnitratis, ʒ iij.
Pulv. tragacanth., ʒ j.
Aquæ, O ss. M.

Or,

248. ℞. Zinci oxidi,
Calaminæ prep., āā ʒ ij.
Acidi hydrocyan. diluti,
Gycerinæ, āā f. ʒ ij.
Liquoris calcis, ad f. ʒ viij. M.

Or,

249. ℞. Zinci oxidi, ʒj.
Glycerinæ,
Aquæ calcis, āā f.ʒj.
Rub up the zinc with the glycerine, and add the lime-water.

These lotions should be applied several times a day, and the parts may be anointed with petroleum ointment. Constitutional treatment addressed to the diathesis is very important in these cases.

Mr. LAWSON TAIT says of eczema of the genitals, that it is in some cases the most distressing disease he has ever witnessed. For its relief, it is necessary to determine whether it is due to the presence of parasites or of some irritating discharge from the vagina. He has repeatedly cured patients with chronic eczema of the genitals by first curing them of chronic endometritis. In elderly women of gouty diathesis, colchicum and acetate of potassa, continued for some months, have relieved some bad cases. Local applications are often useful, but what suits one may not another. Puff powder, the cold sitz-baths, simple cerate, Goulard's water, opiate fermentations, tarry preparations, etc., may be tried in turn. But the most generally useful applications he has found to be strong carbolic acid, and a concentrated solution of acetate of lead in glycerine. The carbolic acid must be used cautiously, and not over a large surface at one time; or it must be used weak, and its strength gradually increased. He has repeatedly seen one application of it relieve the patient for some weeks. If applied widely or in a concentrated form, the patient should be put under an anæsthetic.

## RÉSUMÉ OF REMEDIES.

### LOCAL APPLICATIONS.

*Acidum Boracicum* is praised in the diabetic form. (P. 259)
*Acidum Sulphurosum.* Lotions and injections of sulphurous acid

have been found effective in cases dependent on vaginal discharges.

*Aconitia*, in ointment, is approved by Dr. T. H. TANNER.

*Aluminii Nitras.* Dr. GILL, of St. Louis, in the *St. Louis Medical and Surgical Journal*, recommends the use of nitrate of aluminium. It has in his hands, given more satisfaction than any other remedy. He orders four to six grains to the ounce of soft water, to be used as a vaginal injection or external wash, once or twice a day if necessary.

*Ammonii Murias*, in the following ointment, is useful:

| | | | |
|---|---|---|---|
| 250. ℞. | Ammonii muriatis, | ℥j. | |
| | Pulveris helleboris albæ, | ʒss. | |
| | Adipis, | ℥ iij. | M. |

*Ammoniæ Aqua* sometimes succeeds in obstinate cases like a charm, when injected in diluted form into the vagina:

| | | | |
|---|---|---|---|
| 251. ℞. | Ammoniæ aquæ, | f.ʒ ss.-j. | |
| | Aquæ, | Oss. | M. |

To be freely injected into the vagina.

*Aqua Calcis*, applied warm, together with perfect rest and light clothing, will sometimes afford the desired relief.

*Aqua Fervida.* One of the most efficient means of relieving the pruritus occurring in pregnancy is hot water, applied by means of flannel cloths wrung out of that fluid and laid upon the parts.

*Argenti Nitras.* Dr. GRAILY HEWITT, of London, states that in obstinate cases a rather strong cauterization of the os uteri, with the solid nitrate, will sometimes succeed when other measures fail. Dr. CHARLES (*Annales de Gynecologie*) also speaks most highly of the application of the solid nitrate of silver in the treatment of vulvar pruritus. The seat of the itching is oftenest near the clitoris, or in the nymphæ, sometimes at the margin of the anus. It is necessary to cauterize freely, passing the crayon two or three times over the affected surfaces, and even somewhat beyond them. Dr. CHARLES states that he has found, with-

out a single exception, great relief from the first cauterization, often a complete cure. Sometimes it is necessary to recur to the cauterization a second or third time after some days. Dr. TILT rubs the parts for several minutes with a piece of cotton soaked in a forty-grain solution of silver nitrate.

*Camphora*, in powder, with starch, dusted over the parts, sometimes removes the distressing symptoms.

* *Carbolicum Acidum* is exceedingly efficient in very many cases. (F. 235.)

* *Chloral*, by Prof. J. R. BLACK, of Ohio.

*Balsamum Peruvianum.* An excellent prescription is:

252. ℞. Chloral hydratis, ʒ iij.
Aquæ, f.ʒ iv. M.
Apply locally.

In cases of pruritus vulvæ, where the cause seems to be attributable to irritation, simply, of the nerves, whether in the pregnant condition or otherwise, Dr. C. O. WRIGHT, of Cincinnati, (*American Journal Obstetrics*, July, 1879,) states that he knows of no remedy equal to the local application of chloral hydrate, either in solution or in the form of an ointment. Here it acts by direct contact, producing an anæsthetic influence upon the peripheral extremities of the nerves, and acting by reflex action upon the nerve itself.

253. ℞. Pulv. acaciæ, ʒ ij.
Peruvian balsam, ʒ j.
Oil of almonds, ʒ jss.
Rosewater, ʒ j. M.
SIG.—Apply freely with a camel's-hair brush, eight or ten times a day, to the itching part.

This latter prescription was first suggested by HUFELAND.

*Ergota*, equal parts of the fluid extract and of glycerine, has proved effective in many cases. (*Medical Annals*, April, 1880.)

* *Chloroformum.* Dr. GRAILY HEWITT, of London, obtains the greatest benefit from the application of:

254. ℞. Chloroformi, f.ʒ ss.
Olei amygdalæ expressi, f.ʒ iij. M.

*Creosotum.* A weak solution is sometimes useful.

*Ferri Chloridi Tinctura*, in varying strength, will often be valuable. BYFORD recommends ʒ j. to water O j., and adds that it is especially useful where there is no eruption, and when there is leucorrhœa and a congested dark appearance of the mucous membrane.

*Hydrargyri Oxidi Rubri Unguentum*, well diluted with cod-liver oil, is frequently an effectual application.

**Hydrargyri Chloridum Corrosivum.* The favorite formula of ERASMUS WILSON, of London, is the following:

255. ℞. Hydrargyri chloridi corrosivi, gr. v.–x.
Spiritûs rosmarini,
Alcoholis, āā f.ʒ j.
Misturæ amygdalæ amaræ, f.ʒ vj. M.

Another formula, said to be effective, is given by Dr. MILTON. (*Medical Press*, March 11th, 1868):

256. ℞. Hydrargyri chloridi corrosivi, gr. iv.
Bismuthi oxidi, gr. xxx.
Acidi hydrocyanici diluti, ♏ xxx.
Aquam calcis, ad f.ʒ viij. M.
Apply warm, twice or thrice daily.

*Hydrargyrum Chloridum Mite.* A drachm of calomel in an ounce of lard is a soothing application.

*Hydrargyri Unguentum* is advised locally, by Dr. RINGER, of London.

*Hydrocyanicum Acidum Dilutum* is recommended, largely diluted, by Dr. WEST, of London. It must not be applied too freely, nor over abraded surfaces:

257. ℞. Acidi hydrocyanici diluti, ♏ x.–xl.
Glycerinæ, f.ʒ j. M.

*Iodinium.* The tincture, locally applied, often affords relief.

*Iodoformum.* An ethereal solution of iodoformum, used as a spray, or an ointment of iodoform, will often be found very serviceable.

*Menthæ Oleum or Essentia.* In the *Medical and Surgical Reporter*, vol. XL., 1879, a writer reports a most obstinate case promptly relieved by the occasional application of essence of peppermint.

*Morphia*, subcutaneously, deserves trial in severe cases.

**Olivæ Oleum*, spread over the parts with a feather, sometimes allays the pruritus.

*Pix Liquida.* A glycerole of tar sometimes succeeds:

258. ℞. Glycerine,
Tar, āā ½ lb.
Starch, ½ oz.
Heat the tar and glycerine separately, rub up the starch with the glycerine, mix, bring to the boiling point, and cool.

*Plumbi Subacetatis Liquor Dilutus.* The following soothing application is a useful one:

259. ℞. Liquoris plumbi subacetatis diluti, f.℥j.
Tincturæ hyoscyami, f.℥ij.
Misturæ camphoræ, f.℥viij. M.
To be applied tepid. Rest and an antiphlogistic regimen are at the same time to be ordered.

*Potassii Carbonas*, ℥iij. to water ℥iv., was recommended by TROUSSEAU.

*Potassii Iodidum.* When a syphilitic taint is present, this drug will often promptly remove the irritation.

*Sodii Boras.* The following formula is advised by Dr. WEST, of London:

260. ℞. Sodii boratis, ℥iv.
Morphiæ muriatis, gr. viij.
Aquæ rosæ, f.℥x. M.

*Sodæ Chlorinatæ Liquor*, diluted, has been employed with success:

261. ℞. Liquoris sodæ chlorinatæ, f.℥vj.
Aquæ, f.℥xij. M.

*Sodii Sulphis* has been favorably reported on:

262. ℞. Sodii sulphitis, ℥j.
Aquæ, f.℥iij.
Glycerinæ, f.℥j. M.

*Tabacum.* Dr. TANNER recommends a lotion of an infusion of tobacco, ℥ ij. to a pint of boiling water.

*Tanacetum.* A poultice of tansey leaves, applied as hot as the patient can bear it, is said by Dr. R. L. BUTT, of Alabama, to be efficient in obstinate cases. (*American Practitioner*, August, 1877.)

*Thymol* may be tried. (See above.)

*Zinci Oxidum.* For erythema and pruritis vulvæ, Dr. BRAUN-FERNWALD, of Vienna, recommends

263. ℞. Unguenti petrolei, 5 grammes.
Unguenti cetacei, 3 "
Zinci oxidi, 3 " M.

An ointment for local use.

# CYSTITIS.

## E. J. TILT, M. D. OF LONDON.

The first thing to do in an attack of ordinary acute cystitis, is to put the patient to bed; give a warm hip-bath and warm vaginal injections; and if the pain is severe, leech the abdomen and cover with an anodyne poultice. A rectal suppository of opium, gr. ij., will give ease, and gr. v.–x. of extract of hyoscyamus a day, in pill form, is not to be omitted. The urine should be rendered bland by alkalies, and the patient should drink freely alkaline and mucilaginous fluids.

Cystitis may be caused by pelvic peritonitis, by tumors of the womb or ovaries, by prolapse, procidentia, etc. In such cases these conditions must be remedied before permanent relief of the vesical inflammation can be expected.

## A. J. C. SKENE, M. D., OF NEW YORK.

Existing constipation should be overcome by the free use of saline laxatives. The diet should be carefully regulated. An exclusive milk diet has been found sufficient to cure some chronic cases.

*Benzoic acid* is perhaps the drug that will be found the most useful in the earlier stages in the largest number of cases. It often seems to act as a specific, giving speedy and permanent relief.

264. ℞. Acidi benzoici,
Sodii biboratis, āā gr. x.
Infusi buchu, f. ℥ ij. M.
This amount three or four times a day.

The borax is added to insure the solution of the acid. *Benzoate of ammonia* is more palatable, and acts equally well in the same dose.

In the more advanced stages of the disease, balsam of Peru, copaiba, and oil of turpentine, are important remedies. They should be given in capsules, the same as in gonorrhœa. When the pain is not severe and the urine is loaded with mucus and pus, astringents should be given, as the following, which Dr. S. has employed with good effect

| | | | |
|---|---|---|---|
| 265. ℞. | Extracti buchu fluidi, | f. ℥ ij. | |
| | Tincturæ conii, | f. ℥ j. | |
| | Morphiæ sulphatis, | gr. iss. | M. |

A teaspoonful every three or four hours.

The salicylate of sodium and the sulpho-carbolates have been exhibited with advantage.

In old and obstinate cases the bladder must be washed out and medicated injections used. Of these, the following may be employed to relieve pain:

| | | | |
|---|---|---|---|
| 266. ℞. | Chloral hydratis, | gr. x.–xv. | |
| | Aquæ, | f. ℥ j. | M. |

For an injection in this proportion.

As astringents and alteratives, nitrate of silver, sulphate of zinc, tannic acid, and acetate of lead, of either beginning with gr. i.–ij. to water f. ℥ j., are the most efficient. When the urine is alkaline and offensive from long retention, nitro-hydrochloric acid, gtt. ij. to water f. ℥ j., should be used.

In obstinate cases, nitrate of silver, gr. xx. to water f. ℥ j., is one of the most reliable remedies. Of this strong solution not more than five or ten drops should be used at a time.

As a last resort in painful and incurable cases, Dr. EMMET has established an artificial vesico-vaginal fistula, which maintains complete drainage, and is sure to relieve, and perhaps will cure. The same object may be accomplished at times by a permanent catheter.

### PROF. DR. F. WINCKEL, OF DRESDEN.

This author (*Handbuch der Frauenkrankheiten*) begins his observations on treatment by recommending the greatest care in

cases predisposed to cystitis. The diet and drink should be mild, stimulants and acids avoided. Mild cathartics are preferable to injections, and the abdomen and lower extremities should be kept warm. Of special importance in puerperal cases is that each woman should have her own catheter. He believes that the use of a common catheter frequently extends the disease from patient to patient.

When a catarrh of the bladder has once begun, the experience of many years has taught him that the *local treatment* is all-important. He begins with washing out the bladder with warm water, then with linseed tea, to which one part in a thousand of salicylic acid may be added. The injection should be the temperature of the body, and amount should vary from a quarter to one litre, according to age and size. This is to be repeated two or three times a day, and continued according to circumstances, perhaps for weeks.

Should the above injections fail to answer the purpose, he would have recourse to those of nitrate of silver or tannin, as:

267. ℞. Argenti nitratis, gr. i.–iij.
Aquæ, ℥j. M.

268. ℞. Acidi tannici, gr. iij.–xv.
Aquæ, ℥j. M.

He has never had occasion to use any other means than the above in order to effect a cure. The balsams, especially copaiva, he has not been called upon to try.

It is of great importance in the treatment of this disease that the patient be not permitted to retain her urine for any long time. She should be obliged to empty the bladder at regular intervals, and unless it is completely done the catheter should be inserted. General warm baths are very grateful, and as drinks she may use milk of almonds and Vichy, soda or other alkaline waters.

E. C. GEHRUNG, M. D., OF ST. LOUIS.

In acute cystitis, and in acute exacerbations of chronic cystitis, this practitioner (*St. Louis Courier of Medicine*, August, 1879,)

bas derived extraordinary advantage from elevating and fixing the bladder by means of filling the vagina with a cotton tampon. He uses dry cotton batting. He first surrounds the uterine neck with a few small wads of this substance. This is followed by a large wad or two, thoroughly compressed between the fingers to facilitate the introduction into the vagina, where, when let loose, it will enlarge by its inherent elasticity and fill this cavity. Thus, after careful adjustment of these wads, the bladder will be elevated and compressed against the pubes and abdominal walls, so to speak, between two elastic media.

The patient expresses herself as decidedly relieved, and can at once rise to her feet and feel comfortable. The tampon should be removed and re-applied twice or thrice in the twenty-four hours.

### S. F. GILBERT, M. D., OF ELYSBURG, PENNSYLVANIA.

In severe cases, the use of injections of tannic and salicylic acids into the bladder, is recommended by this writer. (*Med. and Surg. Reporter*, March 24th, 1879.) After washing out the bladder with warm water, several times, he throws in the following:

| | | | |
|---|---|---|---|
| 269. ℞. | Acidi tannici, | gr. x. | |
| | Acidi salicylici, | gr. ij. | |
| | Aquæ, | f. ℥ iv. | M. |

For an injection. Retaining it ten or fifteen minutes, then removing it and again washing the bladder out with warm water, to prevent the hardening of blood or mucus by the acids.

### GRAILY HEWITT, M. D., LONDON.

The timely use of the bladder, after labor, will prevent that destructive *cystitis*, which may be produced by inability to evacuate the bladder. When it is present, with fever, pain, and tenderness, leeches may be required. Demulcent liquids, as barley-water, should be used, and all irritants avoided. *Rest* is exceedingly important. In the *chronic* form, it is best treated with *diluted mineral acids; uva ursi* and *pareira brava* are servicea-

ble in combination with diluted nitro-muriatic acid. Sir HENRY THOMPSON used a decoction of the *triticum repens*, in the male, with great good results, and Dr. HEWITT has found it of equal service in women. He has seen great benefit from counter-irritation just above the symphysis. The general treatment is important. Some require liberal diet, others the reverse.

### PROF. ROBERT BARNES, M. D., LONDON.

Diminish the irritating qualities of the urine; everything known to promote dyspepsia and lithiasis or oxaluria, must be avoided. Demulcents, then tonics, may be used. If lithiasis is present, use alkalies, as soda, potassa, or lithia. More commonly, there is the phosphatic condition, with ammoniacal urine; here give mineral acids and tonics in moderate doses. Warm baths often afford great relief when there is great pain or spasm.

(For a full discussion of the means of relief in cystitis, see NAPHEYS' *Surgical Therapeutics*, 7th ed.)

# URETHRITIS.

E. J. TILT, M. D., OF LONDON.

When the difficulty or pain of micturition is not relieved by diluents, warm hip baths, and poultices, urethritis may be suspected. In this case, the urethra can be felt with the finger to be round, solid, enlarged, and painful to the touch. Cooling injections and mucilaginous drinks are called for, and if these do not answer, a *tannin bougie* should be introduced into the urethra three or four times, at five days' intervals.

Tannin bougies are made by dipping medium-sized bougies into gum-water, powdering them with tannin, letting them dry, and after rubbing off the roughness, dipping them in gum-water previous to using them.

In the event of these failing, a stick of nitrate of silver may be rapidly passed into the passage.

DR. L. DE SINETY.

This author, as previously observed (page 224), believes nearly all cures of urethritis in the female to be of specific origin. With other observers, he has found that the balsams have little influence on this disease in the female. Local baths and urethral injections of weak carbolic acid lotions will often suffice; in more rebellious cases, astringent injections of tannin, sulphate of zinc, or acetate of lead, or perhaps better, a solution of nitrate of silver, gr. j.–ij. to aquæ f. ʒj. If the disease resists, the surgeon may introduce into the whole length of the urethra a pencil of nitrate of silver, withdrawing it after a few seconds. This is a painful expedient, and may be followed by dysuria, but is effective. Another topical means is to introduce astringent bougies, and let them dissolve in the urethra, as:

| | | | |
|---|---|---|---|
| 270. ℞. | Pulv. tragacanth., | ʒj. | |
| | Acidi tannici, | gr. xv. | |
| | Bismuthi subnitratis, | q. s. | M. |

For a urethral bougie 5 centimetres long.

A. J. C. SKENE, M. D., BROOKLYN, N. Y.

*Diseases of the Urethral Glands.* It has been pointed out by this gynecologist, (*Proceedings of the Medical Society of the County of Kings*, December, 1880,) that upon each side, near the floor of the female urethra, there are two tubules large enough to admit a No. 1 probe of the French scale. They extend from the meatus urinarius upwards, from three-eighths to three-quarters of an inch, parallel with the long axis of the urethra. They are located beneath the mucous membrane in the muscular walls of the urethra. The mouths of these tubules are found upon the free surface of the mucous membrane of the urethra within the labia of the meatus urinarius; they terminate in branched glands.

These glands are subject to catarrh, gonorrhœal and strumous inflammation, and tuberculosis, giving rise to extreme tenderness, painful micturition, great discomfort in sitting or walking, sometimes sharp pains and vaginismus and ulceration.

The treatment required is to *lay open the tubules throughout their whole length, and to keep them open.* In the majority of cases, it is all that is required to effect a complete cure. The method of operating is as follows: The patient is placed upon the left side, and a Sims speculum used to keep the labia apart and retract the perinæum. This brings the parts well into view and within easy reach of the operator.

The position and depth of the tubules having been first ascertained, the probe-pointed blade of a very fine scissors is then introduced, and the posterior wall divided its whole length. To prevent the parts from re-uniting, a small piece of cotton, saturated with *persulphate of iron*, should be packed in between the divided edges. Brushing the surfaces over with the iron, without using the cotton, will answer, although less certainly, to prevent re-uniting. Very little after-treatment is required. In the majority of cases, recovery follows the operation of laying open the canals. Sometimes the inflammation lingers in a modified form, but yields to a few applications of nitrate of silver

or sulphate of zinc. In several cases in which the excrescences were abundant, they remained after the operation, although very much reduced in size. An application of nitric acid destroyed them, and they have not shown the least disposition to return.

### A. W. SAXE, M. D., OF CALIFORNIA.

This writer describes *catarrhal* as *urethritis* distinguished from gonorrhœal inflammation, first, by the history of the case and moral probabilities; second, by the absence of tenesmus in most cases of the gonorrhœal variety; and third, by the absence of that profuse muco-purulent discharge which is inseparable from the early stages of the gonorrhœal disease.

It would be difficult to say what remedies *have not* been used in the treatment of this affection in its various stages and phases. The catalogue includes nux vomica, pareira brava, buchu, uva ursi, vaginal injections and suppositories, opiates, prussic acid, copaiba, and cubebs, and lately, the injection of normal urine into the bladder, etc., etc. (*Pacific Med. and Surg. Journal*, April, 1874.)

His plan of treatment is as follows:

1st. Horizontal position in bed indispensable.

2d. Hot applications to the feet, with hot diluent drinks, so as to induce diaphoresis, if possible.

3d. The administration, every two hours, of the following:

271. ℞. Hydrarg chlor. mitis, gr. xxxvj.
Pulv ipecac., gr. viij. M.

Divide in chart. No. xij. Sig.—Dose one powder in a little syrup every two hours, until six are taken. Then follow with decoct. sennæ, q. s., to induce action and free evacuation of the bowels. Diet very light and simple; drinks, mucilaginous; decoctions of elm bark or flaxseed are best, and are rendered palatable by the addition of a little orange peel, sugar, tartaric acid, or lemon juice.

The only sedative or anodyne admissible is a cold, wet napkin to the vulva, changed sufficiently often to insure a low tempera-

ture. Opiates are injurious. Chloral hydrate, gr. xv. to xx., at night, less objectionable, is seldom necessary.

If, after the first twelve hours, and after the bowels have been freely evacuated, there is still much pain in passing the urine, or if there is any tenderness or tenesmus, the remaining powders should be given and followed by the laxative as before, after which it will be, in general, only necessary to keep the patient in bed for a few days, and to see that the bowels are kept open by neutral or alkaline salts every morning. This, with moderately improved diet and mucilages, will insure a perfect and speedy recovery.

The pulverized ipecac. is a very important adjuvant to the alterative, but the quantity must be restricted to the tolerance of the stomach; a half grain will be sufficient in all delicate stomachs, and in many it will be too much. But whatever the stomach will tolerate without emesis, is the maximum.

THOS. ADDIS EMMET, M. D., NEW YORK.

Keep the patient recumbent, the bowels free by salines, and the urine bland. Use hot-water vaginal injections and warm sitz-baths. Also wash out the urethral tract several times a day with warm water. After washing out the urethra, the extract of *pinus canadensis*, to which a little impure carbolic acid has been added, should be thoroughly applied. Sometimes the application of a weak solution of nitrate of silver, or of impure carbolic acid, will be found useful. As the case improves, vaseline or a little tannin and glycerine will protect the parts sufficiently.

# URINARY DISORDERS—IRRITABLE BLADDER, DYSURIA POLYURIA, ISCHURIA, ETC.

PROF. WM. GOODELL, M. D., PHILADELPHIA.

In almost every form of vesical irritation, belladonna and its alkaloid, atropia, are valuable remedies. Dr. GOODELL generally gives it according to the following prescription, which he can recommend:

| | | | | |
|---|---|---|---|---|
| 272. ℞. | Atropiæ, | | gr. j. | |
| | Acidi acetici, | | gtt. xx. | . |
| | Alcoholis, | | | |
| | Aquæ, | āā | f. ʒ iv. | M. |

Four drops before each meal in a wineglassful of water. To be increased or diminished according to the constitutional effect.

In that form of irritability which consists in an inability to hold the water on slight exertion, such as coughing, laughing, running, etc., the cause is generally relaxation of the fibres. Ferruginous preparations are here demanded, and with them the best remedy is a combination of tincture of belladonna, tincture of nux vomica and fluid extract of ergot. If this fails, the next resort would be the application of carbolic or even nitric acid to the urethra, with proper hygienic treatment.

A. J. C. SKENE, M. D., OF BROOKLYN.*

Where the irritability is a pure neurosis, the general system demands most attention. Tonics, a well-ordered diet, change of scene and cheerful company, are required. The bowels should be kept moderately open, and small doses of strychnia administered. Locally, a cup of warm hop-tea containing twenty to forty drops of laudanum may be injected into the rectum, or an

*_Diseases of the Bladder and Urethra in Women_, New York, 1878.

opium suppository combined with belladonna or hyoscyamus; or the following:

273. ℞. Chloral hydratis, gr. xv.
Aquæ, f.℥ j.–ij. M.
For a rectal injection.

Masturbation, malaria and hysteria, are occasional exciting causes of the complaint, and demand appropriate treatment. Abnormal conditions of the urine are also frequent causes. In all cases the urine should be tested. If acid, alkalies are required. In excessive acidity with deposits of uric acid, the following is a very efficient combination:

274. ℞. Potassii bicarbonatis,
Potassii citratis, āā ℥ ss.
Syrupi simplicis, ℥ iv. M.
Take a teaspoonful in half a tumbler of water, adding ℥ j. of lemon juice Drink while effervescing.

In oxaluria the following prescription is looked upon by many as almost a specific:

275. ℞. Acidi nitro-muriatici diluti, ℥ v.–vj.
Tincturæ nucis vomicæ, ℥ iij.
Olei gaultheriæ, ♏ xij.
Aquam, ad f.℥ iij. M.
A teaspoonful in water before each meal. Many of the slightly alkaline mineral-spring waters will also be found of use.

## DR. JOHN S. WARREN, OF NEW YORK.

Dysuria is a common complaint among females, and may be owing to vascular growths about the urethral meatus, inflammatory affections of the urethra, anteflexion, etc. (*N. Y. Medical Journal*, 1878.)

The growths are of all sizes and forms, varying from a slightly congested and hypertrophied condition of the mucous membrane of the canal to the size of a full-grown raspberry, to which, indeed, it bears no small resemblance. It is generally situated at

the meatus externus, and, therefore, readily discoverable by an ocular examination after separation of the labia, though not infrequently it is a little further distant within, and in such cases he has made use of the ordinary ear-specula for their detection and treatment. This tumor may be pedunculated or sessile in growth, is a bright scarlet color, easy to tear and bleed, and, as a rule, exquisitely tender and sensitive to the touch; so that urination, coition, friction from clothing or from washing, give the most intense pain and suffering.

The treatment for the removal of these painful growths is excision by the scissors, cauterization by the actual cautery, nitric or carbolic acids, the silk ligature, and the snare—the one used for aural purposes is best adapted, and is especially used when the caruncle is situated some little distance from the meatus; here, too, the ear-specula or glass tube is very useful for caustic application to the diseased portion of the urethra; for when the growth is sessile in character, its complete destruction by a powerful escharotic, like nitric acid, or the actual cautery, is necessary.

### DR. BRABAZON.

*Irritable Bladder.* In this annoying complaint, this writer (*Brit. Med. Jour.*, 1879,) has found the following injection of great service:

| | | | |
|---|---|---|---|
| 276. ℞. | Argenti nitratis, | gr. ij. | |
| | Extracti belladonnæ, | gr. vj. | |
| | Aquæ destill., | f. ʒ ij. | M. |

For an injection. This solution should be injected twice a week, and allowed to remain in the bladder for about from three to five minutes, and then withdrawn through the canula. Several months may be necessary for a cure.

*Incontinence of urine* is often best treated by forcible dilatations of the urethra, for which WEISS' female urethral dilatory may be used.

### DR. J. HALLIDAY CROOM, OF EDINBURGH,

Sums up the causes leading to *retention of urine* in the female as follows:

1. Injuries or contusions during labor, acting directly or by subsequent inflammations.
2. Pressure of displacements or tumors acting mechanically on urethra or neck of bladder.
3. Injuries or growths acting reflexly.
4. Diseases of nervous system.
5. Direct obstruction within the tube of the urethra, as from stricture or foreign bodies, such as a calculus.

Previous to beginning treatment there are certain preliminaries to be observed, which may be stated thus:

1. In all cases of retention of urine a vaginal examination is necessary.
2. A gum-elastic male catheter of medium size, without the stilette, is the best form of instrument to employ.
3. In retention from displacement it is important to remember the altered position of the urethra. In retroversion of the gravid uterus the vagina is drawn upward and forward, the meatus is drawn upward, and the direction of the upper part of the canal is backward and downward.
4. When any difficulty exists in accounting for the retention a visual examination should be insisted on.
5. It is a safe rule, before giving a definite verdict on any pelvi-abdominal tumor, to empty the bladder.

### PROF. THEODOR BILLROTH, OF VIENNA.*

In many instances the treatment must have direct reference to the cause. This may be a flexion of the uterus, an irritating condition of the urine, exposure to cold and wet, injury in childbirth, etc. In every instance a thorough local exploration is required, palpation with the finger, and perhaps dilatation.

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The general measures required are tepid or warm sitz-baths, muciglainous injections and suppositories of cacao butter, with extract of belladonna, extract of hyoscyamus, or morphia. Bougies, medicated with extract of opium or morphia, may be placed directly in the urethra, and to diminish the pain injections may be thrown into the rectum, composed of linseed tea and laudanum, two oz. of the former to twenty drops of the latter, or a two per cent. solution of chloral hydrate. Acid urine will require free alkaline drinks, and for the general nervous phenomena small doses of lupulin, frequently repeated, or of cannabis indica, are required.

### DR. F. WINCKEL, OF DRESDEN.*

*Paresis of the Bladder.* This author observes that incontinence frequently results from paresis or partial paralysis of the bladder. It can frequently be avoided in women, especially that form of it which occurs in pregnancy, by the regular use of the catheter. When, however, this condition is actually present, the most important indication, in addition to the regular use of the catheter, say every four hours, is the application of electricity. This frequently gives admirable results in a few sittings. The induction current is used, and the one pole is inserted into the bladder, while the other is placed upon the symphysis or sacrum. The sittings are repeated daily, lasting about five minutes.

Sometimes abundant irrigations of salicylizated water (1 to 1200,) repeated every few hours, will be sufficient to dispel a vesical paresis. Nourishing diet, good wine—especially champagne—and white beer, are desirable. In simple atonic conditions camphor, and small doses of tincture of cantharides, from five to twenty drops, one to three times a day, may be cautiously employed, often with advantage.

In that variety of retention of urine, which arises from neglect of emptying the bladder through modesty or from exposure to cold, *ergot* has rendered excellent service. The best form ap-

*Handbuch der Frauenkrankheiten*, edited by Billroth.

pears to be the fresh powder, from ten to fifteen grains, four to five times a day. It is also efficient taken in doses as high as 3j. daily, in paralysis of the bladder, the result of cerebral apoplexy. Strychnia may also be employed in such cases.

For the nocturnal form of enuresis, we have two so-called specifics. One of these, hydrate of chloral, has been carefully employed by our author, without obtaining any permanent good effects. Belladonna, in extract or tincture, offers greater probabilities; but the most efficient is a moderate dose of an opiate on going to bed.

## PROF. F. WINCKEL, DRESDEN.*

*Neuralgia of the Bladder. Cystospasm.* This affection may follow mental excitement, onanism, catching cold at the menstrual period, indulgence in sour beer or wines, etc. There is no local disorder visible, and the condition of the urine is normal. The cramp is frequently obstinate, but usually yields to treatment in the end.

Having paid due attention to diet and drinks, to clothing and habits, further reliance must be placed upon local anodynes. These may consist in a subcutaneous injection of morphia, in rectal injections containing opium, or in suppositories of cacao butter, medicated with morphia or belladonna Internally, one of the best remedies is chloral-hydrate, which may also be used in rectal injections of 15 grains in $\frac{1}{2}$ oz. of water. Another excellent internal remedy is tincture of cannabis indica, of which 10 or 15 drops may be used ten or fifteen times a day.

When the above treatment fails of good results the patient should take warm baths daily, and drink freely of alkaline carbonated waters. Such cases often demand mechanical treatment. This will consist in dilatation of the urethra as recommended by Dr. HERVETSON, of London, who thus cured a case of fifteen years' duration; or else by inserting into the vagina a broad and

* *Handbuch der Frauenkrankheiten.* Edited by Billroth.

soft pessary to exert a moderate pressure on the bladder; or finally injections of morphia into the bladder followed by cauterization.

### DR. ROBRET NEWMAN.

*Urethrocele.* It is maintained by this writer (*Amer. Jour. of Obstetrics*, July, 1880,) that an operation is not always necessary to cure a urethrocele. The medical treatment which he successfully employs is briefly described:

The object is to restore the dilated part of the urethra to its normal calibre and subdue all irritating causes and inflammations. Internal remedies must be given according to symptoms, as antiphlogistics to counteract inflammations, narcotics to allay pain and tenesmus, also to procure rest and sleep; to these may be added emollients and antispasmodics. But our principal reliance consists in local measures, and some of these may even replace the internal remedies; thus narcotics and others may be given in suppositories, subcutaneous and other injections. Hot applications externally. The bladder and urethra must be washed out as often as necessary with hot water, sometimes medicated, as required by symptoms.

This cleaning, and freeing the parts from all foreign bodies, does a great deal of good. The urethrocele proper must be examined by ocular inspection with a short endoscopic tube. Through this tube local applications are made to erosions, ulcerations, and granulations only. This is done by a small brush, with stimulating or astringent remedies, as indicated. Strong solutions must be handled carefully, so that no healthy portion of mucous lining is touched. If a larger surface of mucous membrane is reddened or hypertrophied, he has made applications with the atomizer through the same short endoscopic tubes, sometimes even with the atomizer direct.

It is his conviction that most cases will get well under such treatment, if the patient is kept at rest with proper diet, careful attention, and skillful manipulations with trained assistants. Still more, he has seen a case recover under such treatment, after several plastic operations had utterly failed.

It is remarked by Dr. L. S. OPPENHEIMER, (*Louisville Med. News*, June, 1880,) that irritable bladder frequently arises from urethritis, specific or non-specific. In such cases he has found very rapid improvement follow the application of this solution:

277. ℞. Chloral hydrate,
Carbolic acid,
Potassium iodide, āā gr. j.
Water, ʒj. M.

This is carefully and thoroughly applied by means of a small piece of absorbent cotton. The slight burning sensation caused by the application soon disappears.

*Iodoform suppositories* are also of great value in various forms of urethritis. The following directions for preparing them are given by Dr. C. N. FOWLER, in the *Ohio Med. and Surg. Review*, September, 1880:

278. ℞. Iodoform, ʒj.
Isinglass, ʒiv.
Gum tragacanth, (powd.,) ʒj.
Glycerine, ʒij.
Water (to dissolve ingredients,) q. s. M.

When sufficiently soft the mass is to be rolled into a cylinder small enough to be introduced into these canals and cut into pieces two inches in length. They can be introduced into the urethra of both male and female without the slightest difficulty.

Another effective local anæsthetic is the *bromide of potassium*, injected, in solution, into the urethra. This has been strongly recommended by Dr. J. KIJANIZYN. (*St. Peterburger Med. Wochenschrift*, No. 57, 1879.) It may also be used in the form of a suppository.

[For the treatment of cystitis, incontinence of urine, irritable bladder and allied conditions, see NAPHEYS' *Surgical Therapeutics*, chap. XI.]

# PART II.

# OBSTETRICAL

## THERAPEUTICS.

Vaginal Exploration { External Pudenda / Vagina / Cervix and Orifices / Fœtus / Rectum and Bladder

Pelvis { Il. cr..... Il. Sp..... Inter-trochant.....
Ext. Conj..... Diag. Conj... True Conj.....

Diagnosis of Presentation.....
" Position.....

Prognosis { Date of Labor.....
Character.....

## III. Labor on.....

Pains began — Their character
Os fully dilated at — Waters escaped at
Presentation
Position
Mechanism—
Duration of Stage I. II. III.
Artificial Interference—
Peculiarities—

Child. { Condition / Development / Sex — Length — Weight

Head. { Diameter / Circumference

| O. M. | O. F. | S. O. B. | Bi.-P. | Bi.-T. | T. B. | Caput suc. / Markings |
|---|---|---|---|---|---|---|
| | | | | | | |
| | | | | | | |

Placenta—Form — Size — Weight
Membranes — Liquor Amnii
Cord—Insertion..... Length.....
Convolutions round Ch..... Contortions.....

## IV. Puerperium.

..... as on Special Sheet

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V. CONDITION ON DISMISSAL ON .....

MOTHER.
- General
- Breasts
- Uterus
  - Size
  - Position
  - Os
- Vagina
- Pudenda
- Other Pelvic Tissues

CHILD.
- General
- Mode of Nutrition
- Umbilicus

The first page begins with an indication of the nature of the case recorded on it, according to the class of labor to which it belongs, according to the following classification of labor:

I. NATURAL LABOR.—Head alone presenting, and the labor terminated within twenty-four hours.

II. LINGERING LABOR.—Head presenting, but labor delayed beyond twenty-four hours.

III. INSTRUMENTAL LABOR.—The labor needing to be terminated by some operation—

1. Safe to mother and child—as forceps.
2. Dangerous to child—as embryulcia.
3. " mother—as Cæsarean section.

IV. PRÆTERNATURAL LABOR, including—

1. Pelvic presentations.
2. Transverse "

V. COMPLEX LABORS, presenting complications—

*A.* On the part of the mother—as,

1. Hemorrhage.
2. Rupture.
3. Convulsions.
4. Thoracic and abdominal diseases.
5. Inversion of the uterus.

*B.* On the part of the child—as,

1. Prolapsus funis.
2. Twins.
3. Monsters.

# CHAPTER I.

## THE DISORDERS OF PREGNANCY.

*The Hygiene of the Puerperal State—Abortion and Premature Labor (Prevention and Induction)—Vomiting and Nausea of Pregnancy—Sympathetic Nervous Disorders (Palpitation, Syncope, Neuralgia, Pruritus, Cutaneous Affections, etc.)—Digestive Derangements of Pregnancy (Dyspepsia, Constipation, Diarrhœa. Hemorrhoids, Icterus Gravidarum, Albuminuria.)*

### HYGIENE OF THE PUERPERAL STATE.

In order that the child-bearing woman may be enabled to give birth to a healthy offspring, that the act of delivery may be accomplished with safety to both mother and child, and that her subsequent getting up may not be impeded by debility, etc., it is absolutely imperative that, from the inception of pregnancy, she should be placed under the best hygienic surroundings. She requires an abundance of pure air, sunlight, moderate and careful exercise in the open air, plenty of nourishing and easily-digested food.

Cleanliness must never be neglected; tepid baths are always beneficial.

While sedentary habits are always detrimental, great exertions, as dancing, horse-riding, or rough carriage-riding, must be equally avoided.

There is no need of a special diet; she requires to continue her usual food, merely eschewing anything hard to digest, or particularly stimulating. The pecular cravings incident to pregnancy may be indulged in moderation, unless they are for articles of a hurtful or doubtful character. Nor is it requisite to

medicate her, save for the correction of abnormal conditions, as constipation, acid stomach, vomiting, etc.

Tight lacing, or clothing too tight in any way, will not fail to prove injurious.

In short, let her take the same precautions in the care of her health that she would take under all circumstances. Mental excitement in every form should be sedulously avoided, and she should be carefully surrounded by everything calculated to maintain a tranquil, happy disposition.

To prevent depressed nipples, or any other condition of the mammæ likely to interfere with the proper performance of their functions, these parts must be protected from pressure by tight clothing, or cold from an insufficiency of covering.

Upon this subject we shall speak at length in the proper order.

### GEORGE H. NAPHEYS, M. D., OF PHILADELPHIA.

This author, in his very excellent popular work on the hygiene of women, entitled *The Physical Life of Woman*, has collected together many valuable suggestions as to the care of the health of pregnant women; and when such a work is desired by married persons for their instruction, none better can be recommended. His recommendations, briefly, are with reference to—

*Food.* This should be varied, light and nutritious, with a special regard to the idiosyncrasies of the person, which, it should be noted, are often quite different in pregnancy from the ordinary state. After the sixth month, an additional meal each day should be taken, so that the system can meet the unusual demands upon it for nourishment without overloading the stomach.

*Clothing.* This should be loose; the attempt at concealment by tight dresses, so often made by young mothers, being especially avoided. Flannel drawers should be worn when the pregnancy is advanced. Pressure upon the lower limbs in the vicinity of the knee or the ankle joint should be avoided, more particularly during the last months. It is apt to produce

enlargement of the veins, and finally varicose ulcers. The garters should not be tightly drawn, nor the gaiters too closely fitted, while yet they should firmly support the ankle.

*Exercise.* Dancing, lifting, carrying heavy weights, and similar forms of exercise, should be avoided. The same is true of horse-back exercise and driving over rough roads. Journeys should be taken as little as possible. The vibrating motion and sudden jars incident to railroad traveling often produce nausea and faintness; sea-sickness, with its violent vomiting, not infrequently leads to premature labor. Frequent short walks are the best form of exercise.

*Sleep.* A larger amount of sleep than usual is demanded in the pregnant condition. Women should then lie abed late, and retire early, and a nap during the day is to be recommended. Late in pregnancy some women experience a sense of suffocation on lying down. They should sleep on a bed-chair, or propped up on pillows.

*Mental Condition.* Severe study, anxiety, and all exciting emotions and absorbing intellectual pursuits, should be suspended during pregnancy. The usual wide variations in the mental state, the feeling of despondency and that of exhilaration, should both be tempered by judicious representations of the groundlessness of the one and the risk of the other. The senses should not be over-stimulated by rank odors, loud noises, or extremely sapid condiments.

*Marital Relations.* In the earlier months of pregnancy these may be moderately continued, except about the periods when the woman, if not pregnant, would have had her menses. In such cases the molimen is present, and coition tends to increase it and lead to abortion. In the last three months of pregnancy it is generally wiser to abstain wholly from sexual approaches.

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## ABORTION AND PREMATURE LABOR.

### DR. ANGUS MACDONALD, OF EDINBURGH.

This authority, in a discussion on the subject, (*Edinburgh Med. Journal*, 1880,) divides the treatment of abortion as follows:

1. *Treatment of Threatened Abortion.* The indication is here to arrest the uterine contractions and hemorrhage by rest, recumbency, cool regimen and opiates. Search should be made for hydatids, as myxoma of the chorion is a frequent cause of abortion, and in such cases we ought not to attempt retention of the ovum.

2. *Treatment of Inevitable Abortion.* If the bleeding is moderate and the contractions tolerably powerful, it is a mistake to consider that any specially active treatment is required, as the great majority of cases need nothing further than the free administration of ergot, the maintenance of rest, quiet and recumbency, with cool, non-stimulating diet and careful regimen. Care ought to be taken to retain for the inspection of the doctor every bulky thing that is discharged, so that he may judge as to whether the entire ovum has been expelled or not. In such cases all that will be needed is possibly slight acceleration of the final stage of the abortion by gentle traction upon its presenting point after it is well into or through the os uteri, combined with pressure upon the fundus uteri by the hand on the abdomen. Still, even such easy cases require careful watching, because the hemorrhage is apt to be serious, and the ovum, if slow to separate, is liable to become putrescent.

Dr. M. objects to the wholesale practice of what is called plugging the vagina, which is practiced almost universally in such circumstances. Plugging the vagina may be so conducted as to arrest the most severe uterine hemorrhage, but in that case the vagina must be carefully packed with the material used as a plug, every

corner of it being tightly filled. But what he objects to is plugging as it is ordinarily practiced.

His opinion is, that in the ordinary run of cases, in which the hemorrhage is not specially profuse, we ought to trust to ergot by the mouth, or to ergotine subcutaneously, and that we shall most probably find all will go on right, except that we shall have to hurry the conclusion of the case with slight manipulation, and that wholesale imperfect plugging of the vagina is to be strongly deprecated. If, however, hemorrhage is severe, then active measures must be taken to empty the uterus.

If the cavity of the cervix is sufficiently dilated so as to permit its being traversed by the index-finger, then by chloroforming the patient and introducing the one hand into the vagina, while with the other you depress well the uterus, it is usually possible to explore in detail every portion of the inner surface of a uterus at the third month, to make out whether the ovum is entirely or partially separated from it, and to break up any adhesions that may exist between the ovum and the uterus. Then, after the ovum is completely isolated from the uterine walls, a very moderate amount of pressure upon the fundus is sufficient to expel enough of the ovum through the open cervix to allow of its lower pole being gently grasped between the index and middle finger of the hand in the vagina, and in that way removed.

At one time he used *forceps* for the removal of abortions, and many such are made. But forceps are liable to catch the uterine wall, and his conviction is that the best abortion forceps is the human fingers; and they have at least one advantage over every other instrument, that one can never forget them or leave them behind.

In the meantime, it is advisable to have the patient well under the influence of *ergot*, whether the drug is administered by mouth, subcutaneously, or per rectum. If the abortion has been long on the way, it is advisable to wash out the interior of the empty uterus with a two per cent. solution of carbolic acid, and then make the patient comfortable and let her rest. Suppose, however, as frequently happens, the cervix is not sufficiently dilated

so allow the index finger to pass it, and the bleeding is serious. These are the classes of cases that one usually meets with as examples of imperfect and useless plugging of the vagina. If the practitioner is able to stay with his patient, no objection can be made to plugging the cervix by means of a pledget of lint, except that it is only partially effective as a hæmostatic, is somewhat difficult to insert, and liable to be soon expelled.

But the method of all others, the safest, speediest, and most agreeable, is to introduce a *sponge-tent* into the cervix, and leave it there from two to four hours. During an abortion a tent is never difficult to introduce, as there is almost always a considerable amount of dilatation at the inner os, so that a moderately large tent may be passed with ease. Besides this, the resistance to dilatation in the neck of the uterus is not specially great, so that the tent rapidly expands, and will be found fully dilated in three or four hours at most, and thus septic changes are not likely to be set up by the tent. The gradual distension of the tent acts as an efficient plug against hemorrhage. At the same time, the stimulus of the dilating tent reflexly operates upon the uterus, promoting contraction of it. In this way the abortion is hurried to its close.

In certain cases in which the great bulk of the ovum has been expelled, and from examination of the discharge you are not satisfied that the whole has come away, and yet you find the cervix is not sufficiently dilated to allow a finger to pass it, the use of a copper curette will be sufficient for all the requirements of the case. After its use the uterus ought to be washed out by means of a double catheter with a two per cent. solution of carbolic acid.

3. *After-Treatment of Abortion.* So soon as the uterus is perfectly emptied, and, if thought necessary, disinfected by being washed out with a suitable solution of carbolic acid, the patient should be *kept in bed for a week*, at least. The harm that is done by getting up too soon after abortion is incalculable. It is a common proverb that "it is better to have a broken leg than a bad sprain." There is no doubt that it is frequently better for

a woman to undergo a severe labor than an abortion. The reasons are similar in both cases.

As the risks from septicæmia in connection with abortion are considerable, and the more so if the ovum has, from whatever reason, become putrid before its expulsion, or even if the abortion has been long in the way, the greatest care ought always to be employed, by the use of antiseptic vaginal, and, if need be, uterine washes, to avoid absorption of putrescent materials. The maintenance of efficient contraction in the uterus is also a considerable safeguard against absorption of such materials through the venous channels, at least, and this should be aimed at by the diligent use of *ergot*. The results of *ergot* upon a small uterus, with its muscular wall only imperfectly developed, are, of course, less to be trusted to than in dealing with a uterus at term, when the muscular wall is powerful, so that we ought to depend most on cleanliness and antiseptics.

4. *Treatment of Sequelæ of Abortion.*—The most prominent of these is *menorrhagia* with consequent anæmia.

In some of these cases the placenta, or portion of the decidua left adherent in the interior of the uterus, has undergone a low kind of organization, "has formed what in this country we call placental polypi." When these are present it is not uncommon to find considerable dilatation of the cervix persistent, so that its cavity, months after the abortion, is traversable to the examining finger. But in other cases it would appear that mere relaxation of the muscular wall of the uterus, and the presence of a congested, probably granular condition of the mucous membrane, is all of a pathological nature that can be found.

In the first class of cases the uterus may be emptied without any antecedent dilatation process. The polypi are to be broken off by the finger, or scraped off with a blunt copper curette; the uterus then washed out with solution of carbolic acid; and possibly, with rest and ergot, all will go well. The solution of the *pernitrate of iron* is doubly useful in such cases as an internal medicine; it meets the requirements of the system for iron, while it acts at the same time as a powerful hæmostatic.

In those cases in which the cavity of the cervix is tightly closed, the most efficient means of treatment is the use of a *tangle* or *sponge-tent*. Before the use of the curette became so general, many were in the habit of dilating such cases, and although finding nothing in the uterus to remove, almost always observed that the hemorrhage ceased. The possible explanation was that the irritation of the tent stimulated the flabby uterus, made it firmer, and less inclined to bleed.

It very often results that after such dilatation, when you scrape the whole of the interior of the uterus with a copper curette, you find that nothing will come away. On other occasions you find that soft, thickened fungous patches of hypertrophied mucous membrane peel off freely from a particular portion or portions of the area of the body of the uterus. There is no doubt but the removal of them is necessary to the restoration of healthy action of the mucous membrane of the body of the uterus.

Hence, in general term, in the treatment of severe and exhausting hemorrhage, continuing for months after an abortion, the proper treatment is to dilate the cervix with a tangle-tent, and explore the cavity of the uterus, unless the cervix is so open as to allow exploration of the cavity of the body without dilatation. If, then, any considerable portion of lowly organized remains of the abortion are present, they may be removed with the finger-nail. If, however, there is only present an irregular soft condition of the mucous membrane, then the surface ought to be scraped with a copper curette.

### DR. THEOPHILUS PARVIN, OF INDIANA.

Dr. PARVIN, writing upon the treatment of abortion, states his belief that ergot is a hindrance rather than a help in securing complete evacuation of the uterus in early abortions. The *tampon*, however, especially if introduced into the cervical canal, assists to procure dilatation, and, while restraining the loss of blood, causes what little escape of blood takes place above it to

aid in separating the ovum from its attachments to the uterus. So long as the ovum is entire (and its integrity should be scrupulously preserved,) we may hope for its complete expulsion, and should usually abstain from active interference. When the sac is broken, we should empty the uterus artificially, if, after removing a tampon that has been applied a few hours, the hemorrhage is at all profuse and the ovum is not expelled at once. This should be done with the finger; and, instead of drawing the uterus down within reach of one finger, as recommended by SIMPSON, of Edinburgh, it is better to follow the practice of MAURICEAU—introduce the hand into the vagina (under anæsthesia,) and use two fingers within the uterus, "as crabs do when they grip anything with one of their forked claws."

When immediate evacuation of the uterus is demanded, on account of dangerous hemorrhage or an offensive discharge, announcing the possibility of septicæmia, there is a still better way to proceed: "Let the patient lie on her back upon a hard bed, her hips brought to its edge, lower limbs strongly flexed; then introduce Neugebauer's speculum, and bring the os fairly in view; now catch the anterior lip with a simple tenaculum, or better, with Nott's tenaculum-forceps, and then, if there be any flexion —and it is not uncommon in cases of spontaneous abortion to observe this—use gentle traction to straighten the bent canal; at any rate, fix the uterus by the instrument. Now, take a pair of curved polypus-forceps of suitable size, or, better still, Emmet's curette-forceps, and gently introduce the closed blades into the uterine cavity, open them slightly, then close them and withdraw, when the fragments of membranes can be removed, and the instrument re-introduced. Repeat this three or four times if necessary." The uterus should then be swabbed out with Churchill's tincture of iodine by means of an applicator. Finally, ten or fifteen grains of quinine should be given, and it will be very rarely indeed that convalescence will not be prompt and perfect.

PROF. W. S. PLAYFAIR, M. D., EDINBURGH.

This author believes that we may hope to prevent an abortion if there is no dilatation of the os and the hemorrhage has not been excessive. But if the os be open, the finger can touch the ovum and pains are present, the indication is that the ovum must be expelled. Place the patient in bed, keep her cool, give her light diet. She should not rise for any purpose. To avert uterine contractions, no remedy is so useful as *opium*, given freely and repeatedly, either in the form of the tincture or of Battley's sedative solution, say 20 to 30 minims, repeated in a few hours. Chlorodyne is still better, in doses of 15 minims every third or fourth hour. If advisable, as from irritability of the stomach, this may be given in starch by the rectum. The patient should be kept under the influence of the remedies for several days, until all symptoms have disappeared; at the same time avoid constipation, itself a source of irritation, by small doses of castor oil, or other gentle aperients.

Dr. R. P. HARRIS, American editor of Dr. Playfair's work, speaks emphatically of the value of opium in these cases.

As a prophylactic of the tendency to abortion, remove the causes when known, as a syphilitic taint and constitutional debility. Retroflexion of the uterus may be relieved by a pessary, until the uterus has risen out of the pelvis.

Syphilitic infection should always be inquired for, where frequent abortions occur, and both husband and wife should be placed under anti-syphilitic remedies. DIDAY insists that at each impregnation the mother should be thus treated, even though she exhibit no traces of the disease. Thus we may hope that infection of the ovum may be prevented.

In *fatty degeneration of the chorion, villi* and other morbid states of the placenta, preventing proper nutrition of the fœtus, nothing can be done save to improve the mother's health. SIMPSON recommends *chlorate of potassa* when the child habitually dies in the latter months of pregnancy, with the idea of supplying oxygen to the blood. The theory is doubtful, though

the drug may act well as a tonic. It may be given in doses of 15 to 20 grains, three times a day, and advantageously combined with dilute hydrochloric acid.

Where no appreciable cause can be discovered, prolonged rest, at least until the time has passed at which abortion usually has occurred, will give the best chance for its avoidance. Care will be necessary lest the health suffer from want of fresh air and exercise. The rest should be extremely strict at the menstrual periods; in the intervals, she may lie on a sofa and spend part of the time in the open air. Sexual intercourse should be prohibited.

When abortion is inevitable, we must favor the expulsion of the ovum. When the os is dilated, the pains strong, the ovum separated and protruding, depress the uterus from above by the left hand, and scoop out the ovum with the examining finger. If beyond reach, administer chloroform, pass the entire hand into the vagina, and the finger into the uterus. This is safer and more sure than the use of any form of ovum-forceps. When this fails, or the os is not dilated, plug the vagina. The best plan is with pledgets of cotton-wool soaked in water. Each should be soaked also in glycerine to prevent the offensive odor which otherwise will arise. In six or eight hours remove the plug and insert a fresh one if requisite. Two or three full doses of liquid extract of *ergot* f. 3 ss.–f. 3 j. each, or a subcutaneous injection of *ergotine*, may be given. These two excitants of uterine action, the plug and the ergot, often effect complete detachment, and the ovum is readily removed when the plug is withdrawn. When dilatation does not readily occur, it may be aided by tents, especially the sponge, which also acts as an effectual plug.

As long as the placenta or membranes are retained, septicæmia is likely to occur, therefore it is important that they should be removed; and in the event of delay, fœtor, and decomposition may be prevented by the use of intra-uterine injections of diluted Condy's fluid; not more than a drachm or two should be

thrown in at once, and the os must be sufficiently patulous, or injury may result.

### A. J. C. SKENE, M. D., OF NEW YORK.

This writer (*Half-Yearly Compendium*, July, 1876,) sums up the rules of practice in abortion as follows:

1. Where the symptoms of abortion are slight, and of short duration, efforts should be made to arrest it.

2. During dilatation of the os, opium should be given, if there is any call for it, and ergot should be carefully avoided.

3. Hemorrhage should be controlled by tamponing the cervix, the hydrostatic dilator being the best for that purpose.

4. When the os is fully dilated, and the ovum is not properly expelled after the use of ergot, it should be removed by the forceps and curette.

5. Post-partum hemorrhage should be arrested by ergot and the intra-uterine tampon.

The inflammation of the uterus, peritoneum, or cellular tissue, which may arise, should be treated on general principles.

### PROF. WM. LEISHMAN, M. D., GLASGOW.

In some cases, it would seem as though the uterus had contracted a habit of abortion; hence we must tide over this period, and thus break up the habit.

The strictness of rest must be proportioned to the number of abortions; in obstinate cases, nothing but absolute confinement to bed will suffice. When irritations arise, liable to act reflexly on the uterus, these must be removed, as diarrhœa, skin or bladder troubles, or even toothache. Caution the patient against tight lacing. When hemorrhage commences, rest on a hard mattress must be enjoined. The food should be non-stimulating, and meat sometimes is best avoided. *Opium* is the sheet-anchor. *Chloral*, by the mouth or rectum, has been employed with success. Until the fœtus is known to be dead, act as though it were

living. When, however, abortion is inevitable, as shown by discharge of the liquor amnii, profuse hemorrhage, and violent pains, in the first three months, the less we interfere the better, for experience shows that the ovum will generally escape entire, while manipulations may only serve to rupture the membranes, and thus cause retention of a part or the whole. Plug the vagina for hemorrhage, as suggested by DEWEES, with a large sponge filled with vinegar. Astringents are sometimes given with good effect, as acetate of lead, gallic acid, and the mineral acids. In more advanced pregnancy, oxytocics come into use. A simple enema, or one containing turpentine will aid to excite uterine contractions. The placenta generally occasions the most difficulty. When this is retained, and the os closes, we must wait; the finger cannot be introduced, and ergot is of no use. Symptoms must be met as they arise. When dilatation occurs, or severe flooding demands action, careful effort must be made to bring away any portion that may protrude. More reliance should be placed upon fingers than instruments.

After an abortion, the health should be built up by tonics as demanded, and fatigue and exertions should be avoided for a while.

### ALFRED MEADOWS, M. D., OF LONDON.

*Ergot* is exhibited by this author in habitual abortion dependent upon a weakened atonic condition of the uterus. (*Practitioner*, September, 1868.) He commences in small doses (℥v.–viij. extracti ergotæ liquoris, *British Pharmacœpia*,) as soon as pregnancy is known to exist, and continues it in increasing doses (℥xx.–xxx.,) as long as it may seem necessary, certainly till after the period of the accustomed abortion, but with the occasional omission of a week or two. In unsuitable cases, this mode of treatment may be productive of mischief; for, as Dr. MEADOWS remarks, its employment is a matter of extreme delicacy, requiring a very careful discrimination of the cause of previous abortions, and of the actual present condition of the uterus.

On the general use of *opium* in abortion, it may be concluded,

from the evidence offered, that it is of value in *threatened abortion* arising from accident, from mental causes, or from habit, when it may be given by the mouth, or in a cold starch injection thrown into the bowel, repeated every night, or oftener, according to circumstances; the application of cold, perfect quiet, and unstimulating diet, being at the same time enforced. When, however, abortion is threatened from fœtal disease or imperfection, so that the premature emptying of the uterus is but an effort of nature to get rid of that which she cannot accomplish, opium does harm, by retarding the emptying of the uterus, which must sooner or later take place. After *abortion has taken place*, opium allays excitement, tranquilizes the circulation, and procures sleep.

ROBERT BURNS, M. D., OF PHILADELPHIA

Speaks highly of arsenic as a hæmostatic, in doses of twenty minims of the liquor potassæ arsenitis, at intervals of half an hour, until some decided effect is produced.

When gestation has reached the fifth month, the membranes may be punctured to lessen the hemorrhage and facilitate expulsion. It is better to leave a portion of the membrane, etc., than to employ forcible extraction, unless the discharge be excessive or offensive; then any fragments should be removed, and the vagina and uterus washed out with warm water. Generally, when all is away, the hemorrhage at once ceases. Even a very small portion will serve to keep up the discharge, and this is a valuable point for diagnosis and treatment. Prophylaxis will consist in local depletion and saline purgation in blood stases; support and tonics for debility; quiet, especially at the menstrual epochs; avoidance of sexual excitement, and sedatives when required. Chalybeate tonics are to be avoided, as encouraging abortion, though in anæmia they are undoubtedly of great service.

TANNER, and LAFERLD, of Malta, regard *asafœtida* as a uterine tonic in weak, irritable women, where there is an absence

of vascular congestion; *ergot* acts in this way, and may be given in doses of ten minims of the liquid extract every four, six or eight hours, and for two or three weeks at about the time when the abortion is expected from previous experience. In syphilitic taint, bichloride of mercury is invaluable.

### PROF. KARL SCHROEDER, M. D., OF BERLIN.

To prevent the abortion, the woman should remain constantly in the dorsal position, and a few full doses of tincture of *opium* should be given by the mouth or rectum. When profuse hemorrhage threatens the life of the mother, the tampon, *mineral acids* and *ergot*, internally, and vinegar and cold water to the abdomen. The caoutchouc tampon is objectionable, as it, when filled, only increases the tendency to dilatation of the os and uterine contractions. Lint pressed against the bleeding surface adheres and checks further flow; hence a small tampon will often suffice. Introduce the speculum, open it widely, and pack the lint entirely over the bleeding cervix, and then fill in behind this; withdraw the speculum while holding the plug closely in place with a long rod. At the end of six hours remove the tampon and re-apply it if necessary. The hemorrhage may thus be entirely checked, or the ovum may be found lying loose within the cavity. As this method does not increase uterine action, hope may be entertained, even yet, of saving the ovum.

To remove the ovum, when necessary, HONING recommends the compression of the uterus by combined manipulation. Two fingers of the one hand are brought into the anterior vault of the vagina, and placed against the body of the uterus, while the other hand presses from outside upon its posterior wall. Or, the uterus may be pressed from outside against the symphysis. This method of expulsion succeeds easily and perfectly.

After the hemorrhage is over, the patient is to be treated as a parturient woman. If the ovum was putrefied, or decomposing shreds are found, injections of tepid water or infusion of chamomile should be used thrice a day.

J. G. SWAYNE, M. D., BRISTOL, ENGLAND.

The following formulæ are of service in cases of *accidental hemorrhage during pregnancy:*

| | | | |
|---|---|---|---|
| 279. ℞. | Acidi sulphurici diluti, | f.℥j. | |
| | Tincturæ opii, | ♏xl. | |
| | Infusi rosæ compositi, | f.℥vj. | M. |

Two tablespoonfuls every other hour.

| | | | |
|---|---|---|---|
| 280. ℞. | Plumbi acetatis, | gr. xviij | |
| | Acidi acetici, | ♏ xx. | |
| | Morphiæ acetatis, | gr. j | |
| | Aquæ destillatæ, | f.℥vj. | M. |

Two tablespoonfuls every hour

The woman is also, of course, to be kept in a recumbent position, and cold compresses applied to the abdomen and vulva. Cold drinks and cold-water enemata may be administered. By the employment of these expedients, the bleeding may be checked, and the patient carried in safety to the close of her pregnancy.

PROF. FLEETWOOD CHURCHILL, M. D., DUBLIN.

At an early stage, this author has repeatedly found the tincture of *Indian hemp*, in doses of 5 or 6 drops every 2, 4 or 6 hours, to check the hemorrhage. The usual remedies failing, and the abortion being inevitable, and the hemorrhage becoming alarming, he employs, for the removal of the ovum, an instrument consisting of a steel rod divided into three claws at one extremity, which expand widely when set free. This is enclosed in a small flexible catheter, and the claws are thus closed; when retracted, the claws open. The ovum may thus be seized without danger to the uterus, and where it is impossible to introduce the hand. The introduction of the hand into the vagina and the fingers into the uterus is not free from danger. DEWEES employed a wire crotchet to bring away the ovum, but the pla-

cental forceps of Dr. HENRY BOND, of Philadelphia, are perhaps the best for the purpose.

In cases of great flooding, the plug becomes necessary, and where the ovum is still retained, half drachm doses of ergot may be given occasionally.

## INDUCTION OF PREMATURE LABOR.

### CLEMENT GODSON, M. D., OF LONDON.

This writer (*St. Bartholomew's Hospital Reports*, 1875,) enumerates the following as the methods proposed for inducing premature labor:

1. Evacuation of the liquor amnii by puncturing the membranes.
2. The administration of certain drugs, particularly ergot of rye.
3. The injection of water into the vagina.
4. The injection of water within the uterus.
5. The injection of atmospheric air or carbonic acid within the uterus.
6. Galvanism.
7. Irritaticn of the mammæ, by means of cupping-glasses.
8. Separation of the membranes from the uterine wall, as far as is practicable, with the finger.
9. Insertion of a long gum-elastic catheter between the membranes and the wall of the uterus.
10. Dilatation of the vagina by means of air-bags.
11. Dilatation of the os uteri by air-bags.
12. Dilatation of the os uteri by means of sponge-tents.

Most of these are open to the objections that they are uncertain, or hazardous, or have unpleasant sequelæ.

Most of them are practiced in such a manner as to force on too hurriedly the uterine contractions; and that which consists in the evacuation of the liquor amnii stands self-condemned, as de-

priving the womb, at the very outset, of the all-important dilator provided by nature.

Dr. G.'s mode of procedure consists in insinuating, night and morning, between the cervix uteri and the membranes, sponge-tents of gradually increasing size; the first, and each succeeding one, being as large as the parts will admit. On removing each tent, and before replacing it by another, a warm douche, containing Condy's fluid, is administered. He has found the use of one, two and three tents to be sufficient, and has never had occasion to employ more than four.

The instrument by means of which the tent is placed in position was made for him in London. It is fully described in the *Lancet*, April 22d, 1871.

It entirely obviates the use of the speculum, and being provided with what is equivalent to a universal joint, it enables the tent to be pushed, without extraneous guidance, between the cervix and the membranes, taking of itself the readiest path presented to it. For the same reason the membranes run no risk of puncture. The tents themselves are short, rounded at the extremity, and perforated, to facilitate adaptation to the instrument.

The apparatus, and the mode of its application, are so simple, and so free from inconvenience and danger, that its use causes in practice little or no anxiety on the part of the patient; and until labor sets in, she moves about without pain or inconvenience, regardless of the presence of the tent.

### PROF. W. M. LEISHMAN, M. D., GLASGOW.

The rupture of the membranes by means of a quill or in any other way, is a certain and effectual method, but open to serious objections. It compromises, very decidedly, the chances of the child, by allowing pressure upon it to the end of the labor. Again, if the os is imperfectly dilated, the membranes may be retained with a fatal result to the mother.

Prof. HAMILTON, of Edinburgh, recommends separation of

the membranes by a finger or the sound passed within the os uteri. This may, however, be solely due to the forcible dilatation of the os, and which may be equally successfully done with tents. Most operators prefer, as safe and efficient, the introduction of an elastic catheter within the uterus and outside of the membranes, up a distance of six or seven inches, and allowed to remain. Sooner or later, the uterus is stimulated to contract.

An equally safe method is the use of Braun's colpeurynter, Gariel's air pessary, or other form of plug. Vaginal or uterine injections are made by directing a constant stream of warm water upon the os by means of a long tube. Some allow a free egress for the water; others endeavor to retain it so as to act in detaching the membranes. This is repeated once or twice a day, and generally brings on contraction after eight or ten applications. It is by no means free from risk, and full egress should always be allowed for the fluid.

The intra-uterine douche is effective, though doubtful as to safety.

The most recent method is that of BARNES; dilatation of the os by means of graduated fluid pressure. He makes two stages—provocative and accelerative. For the first he passes an elastic bougie six or seven inches into the uterus, coils up the remainder in the vagina, and lets it remain. Next morning there is generally some uterine action; or it may be suffered to remain. Before rupturing the membranes, adapt a binder to the abdomen tightly, so as to keep the head in close apposition to the cervix. This often prevents the cord being washed down. Dilate the cervix by the medium or large bag till it will admit three fingers; rupture the membranes, introduce the dilator, and expand till the passage is open for the child. If there is room, and there are pains, leave the rest to nature. Otherwise, use the accelerative method—the forceps or turning; or, if the passage of a living child is hopeless, craniotomy. Twenty-four hours in all from the insertion of the bougie should see the termination. The fiddle-shaped bags are used as dilators. The middle is

grasped and held by the os so that they cannot slip either way. Their introduction is effected by means of the cup-shaped pouch in which the sound is inserted. First, empty out the air and turn the cock; then fold the bag in itself, and pass it within the os. The nozzle of a syringe filled with water is adapted to the tube, and the fluid cautiously injected. After moderate dilatation the cock is closed and the bag left in place. Subsequent dilatation should be gradual, and is an imitation of the effect of the liquor amnii in the membranes. Larger bags may be subsequently used, or two inserted at once

Galvanism is uncertain, and its use has been abandoned.

PROF. KARL SCHROEDER, M. D., BERLIN,

thinks KRAUSE'S method, the introduction of an elastic catheter, is preferable. This is explained above. Generally this suffices, and labor sets in. Should delay occur, COHEN'S method of injections between the ovum and uterus may be used. A catheter is passed well up, and tepid water injected till tension is felt. The membranes are thus detached, and uterine action is aroused. But this is more inconvenient, and very dangerous.

TARNIER'S method, by the "intra-uterine dilator," can never supersede the simple catheter. It is inconvenient, and not applicable for general practice.

Mechanical dilatation is recommended by BRUNNINGHAUSEN, KLUGE and BARNES. These dilators are difficult to introduce, and are of no advantage. Those of BARNES require a previous dilatation permeable by two fingers.

Plugging the vagina as by SCHOLLER, HUTER and BRAUN: the colpeurynter is slow and uncertain, inconvenient, and causes great pain. It may be useful where there is hemorrhage, or when the pains cease, to provoke them, or where there is also required a counter-pressure against the membranes which are about to burst. This the colpeurynter is sure to prevent.

KIWISCH'S ascending douche, at 30–35° R. against the os for 10 to 15 minutes, is not reliable, nor free from danger, but may

favor dilatation of a closed cervix, and prepare for the use of other means.

Puncture of the membranes, as by SCHEEL, HOPKINS and MEISSNER, is followed more slowly by the desired effect. ROKITANSKY, Jr., very highly recommends it. He considers that it gives better results to mother and child than any other method. MEISSNER used a long, curved trocar, to puncture the membranes high up. This is difficult, and now abandoned.

### ALFRED MEADOWS, M. D., LONDON,

Adopts in preference the following plan: He secures free evacuation of the bowels, then introduces a sea-tangle tent, the size of a No. 7 catheter. The os is thus dilated so as to admit a small-sized rubber bag; in five or six hours this may be withdrawn and a larger one introduced, and so on till action is induced. Or an elastic bougie is passed into the uterus, so as not to rupture the membranes. The cervix is now generally the size of a five-shilling piece. Uterine action is set up, and goes on more or less speedily.

### PROF. W. S. PLAYFAIR, M. D., LONDON,

Considers it always an advantage to allow the pains to come gradually, in imitation of natural labor; therefore, if after the bougie has been inserted, contraction come on strongly, the case may be left to nature. If feeble, resort to dilatation by means of the fluid bags, and subsequently puncture the membranes. In this way, the labor is completely under control, and he believes this method will commend itself as the simplest and most certain mode yet known, and most closely imitating the natural process.

### PROF. FLEETWOOD CHURCHILL, M. D., DUBLIN.

Abdominal frictions and manipulations with warm baths, etc.,

rarely succeed. This author thinks the plan of KIWISCH admirable. This is the throwing a stream of warm water upon the os by means of a long tube. It rarely fails, and may be used for ten or fifteen minutes once or twice a day. The profession is now in possession of sufficient experience to pronounce favorably of this plan; and it will probably supersede all others.

The application of belladonna to the os uteri is doubtful and dangerous.

Galvanism has been successfully employed by a number of practitioners.

### CHARLES CLAY, M. D., LONDON.

This author, like many others, has no confidence in emmenagogues, as they constantly fail, even when pushed to an enormous extent. The only certain means is the destruction of the vitality of the embryo, as it then becomes a foreign body. This is best effected by the use of the male catheter; the escape of waters down the tube, with a tinge of blood, is evidence of success.

### PROFESSOR SCANZONI, VIENNA,

Proposes to excite the womb by reflex action, by sucking and rubbing the breasts; these failing, he says SCHEEL'S mode of perforating the membranes is the most sure, and rarely fails, but is objectionable because of the delay and the risk to the child, etc.

He alludes to the gradual dilatation of the neck by sponge-tents and tampons in the vagina as inconvenient, painful and otherwise objectionable.

He says, in review, the uterine douche of KIWISCH is preferable when prompt action is not obligatory, because of hemorrhage, and the membranes can readily be perforated if danger is imminent, and thus the volume of the womb may be rapidly diminished. The injections into the cavity of the uterus by COHEN'S method are difficult, especially in the primipara, where

the neck is closed or displaced; and dangerous at least to the child, because of the liability to penetrate the membranes.

### PROF. S. TARNIER, PARIS,

Prefers the separation of the membranes when the internal orifice is open; dilatation of the neck when the orifice will not admit of the passage of instruments to separate the membranes. A last resource will be the excitation of reflex action.

## RÉSUMÉ OF REMEDIES.

### 1. UTERINE SEDATIVES AND TONICS.

*Arsenic* has been recommended in threatened abortion from irritable uterus, by Mr. HENRY HUNT, of Dartmouth, England.

*Cannabis Indica* has been found useful in impending abortion from congestion or irritability of the uterus. From five to twenty drops of the tincture may be given every two or four hours. Drs. CLENDENING, REYNOLDS, LEVER and CHURCHILL praise its effects.

*Ergota* is constantly employed in accidental abortion. (See above.)

*Opium* is one of the most important agents of this class. (See above.)

*Plumbi Acetas* is a valuable adjunct to opium in uterine hemorrhage with threatened abortion.

*Potassii Chloras.* Inflammatory affections of the placenta are a frequent cause of abortions. There is often an inherited predisposition to such affections, and they are especially frequent in the strumous and arthritic diatheses. Where there are occasional "shows," discharge of fœtid wind, irregular nausea, general exhaustion, etc., such a condition may be diagnosed. In these cases Dr. JAMES N. MCDOUGALL (*Edinburgh Med. Journal*, Nov., 1880,) has witnessed the most beneficial effects from chlorate of potash and tincture of the chloride of iron in full doses in combination.

Frequently these agents, with proper hygienic precautions, will enable the woman to carry the fœtus to full term.

*Quinine* is thought by many to act as a uterine stimulant, and to be advantageous in this accident.

*Sabina* is useful against the hemorrhage which indicates approaching abortion in women of bad fibre. In these cases, the dried powder of the leaves may be given, in doses of gr. xv.–xx. thrice daily. In habitual abortion depending upon diminished vitality of the uterine system, savin has also been advised:

281. ℞. Sabinæ, ʒij.–iv.
Aquæ ferventis, f ʒ vj. M.

A tablespoonful thrice daily, taken during the intervals of the menstrual period. This remedy must, however, be employed with caution.

*Tannicum Acidum*, in combination with opium and ipecacuanha, has been strongly advised in threatened abortion.

*Terebinthinæ Oleum* has been favorably reported upon by Dr. Fordyce Barker in the treatment of abortion; given as an enema, he found it to act as an effective oxytocic, as well as hæmostatic.

*Viburnum Prunifolium* is an extremely valuable preventive of abortion, often succeeding where other means fail. The bark of the root is the portion used, from which an extract is prepared. It has been especially noticed by Dr. E. W. Jenks. (*Gynecological Transactions*, 1876.)

*Emetics.* Dr. J. G. Stokes, of Illinois, (*Half-Yearly Compendium*, vol. VIII.,) advocates the use of emetics in all cases of abortion, especially in those continued cases of threatened abortion which are so annoying to both physician and patient.

### 2. ECBOLIC OR ABORTIFACIENT AGENTS, OR UTERINE EXONERANTS.

*Aloes.* Most of the patent pills sold for the real if not avowed object of inducing abortion are composed of aloes combined with drastic cathartics, the effect of the violent

peristalsis induced being to excite by sympathy uterine contractions. It is needless to add that this plan is both unscientific and dangerous.

*Cantharides* sometimes produces abortion through the renal and vesical excitement which it causes. As a medical means to this end, it is too dangerous.

*Ergota.* Probably the most efficient of known ecbolics continues to be the various species of ergot, as derived from rye, wheat, rice, or maize. It has, however, been denied that it acts as such, except in the uterus at term. The eminent Dr. PAUL DUBOIS denied that it could provoke abortion. The correct opinion seems that advocated by FONSSAGRIVES (*Thérapeutique*, 1878,) that its ecbolic action is null at the commencement of pregnancy, but increases in direct proportion as the latter progresses.

*Gossypium.* The fresh bark of the root of the cotton plant, in decoction (℥iv. of the root to water Oij., boiled to Oj.,) in doses of f. ℥iij. repeated, is a popular abortifacient in the southern states. The fluid extracts on sale are generally almost or quite inert.

*Jaborandi* and *Pilocarpin* Considerable attention has been directed to these agents as ecbolics, and they have recently been carefully studied by Prof. P. MULLER, of Berne. He justly remarks that it certainly would be a great advantage if premature labor could be induced by internal remedies. All the dangers from traumatism and infection would be absent, and the objections which now exist against ergot might be found wanting in the new agent. But his experiments were not encouraging. To test the contraction-exciting power of pilocarpin, MULLER gave it to puerperal women, whose uteri are particularly susceptible to such excitants. Multiparæ with flaccid abdominal parietes and large, readily palpable uteri were chosen, and both ergotin and pilocarpin given them. The results showed that pilocarpin does not act as powerfully as ergot, for if the observations are continued through several days, after two days the pilocarpin loses its effect.

*Quiniæ Sulphas.* From a mass of evidence laid before the American profession, of recent years, there would

seem to be no doubt but that, under some circumstances not yet ascertained, quinine provokes abortion. This would appear to be more especially the case when administered in large doses in the absence of malarial poisoning in the system.

*Ruta.* The rue is one of the oldest known abortives. Its specific action as such, and independent of any intestinal irritation, has been abundantly established by the recent researches of Dr. E. HAMELIN. (*Dict. des Sciences Med.*, 1877.) Although uncertain in its action, he thinks the uterine contractions to which it gives rise are more physiological in character than those following the use of ergot. In administering it, he prefers an infusion of the fresh leaves and roots to any other form (℥ ij.-iv. to water Oj.) to be taken in two or three doses at intervals.

*Sabina.* The reputation of this plant as an ecbolic is probably not justified. Dr. E. HAMELIN, who has studied its properties carefully, doubts whether it excites directly any uterine action; if such follows, it is the result of transmitted irritation.

*Sodii Boras.* The use of boras as an ecbolic is of doubtful efficacy.

*Tanacetum*, often used for criminal purposes as an abortifacient, is, in the opinion of STILLÉ, incapable of producing any such result.

*Hot Water.* Dr. J. F. HORNE recommends the use of hot-water injections into the uterus to cause contraction of that organ after abortion. He uses two pints of water as hot as can be borne by the hand, employing an ordinary Higginson's syringe with vaginal tube. It is found to be much more efficacious than ergot in causing expulsion of the placenta and cessation of the hemorrhage. Three successful cases are related. (*Obstet. Journal*, March, 1880.)

# VOMITING AND NAUSEA OF PREGNANCY.

## DR. EUGENIO BARBIGLIA OF NAPLES.*

In his very complete study of this subject the above-named writer classifies one means of opposing the vomiting of pregnancy under the following headings:

1. *Medical.* In the first rank stand *alkalies*, especially the bicarbonate of soda. When gaseous eruptions are present this should be combined with charcoal, the latter persisted in in frequent doses until the fœces are blackened. Aperient salts, in small doses, to act on the lower bowels, are frequently of use, but all active purgation must be avoided. The bitters stand next to the alkalies. Gentian, colombo, quassia and an gostura or absinthe may be used alone or combined. Cinchona combined with iron may be demanded in feeble cases. Occasionally the vomiting has been found to depend upon the presence of intestinal worms, in which cases santonine will give prompt relief. Stimulants, either alcoholic or as strong coffee and tea, benefit some cases. The numerous narcotics employed by many physicians are rarely of decided efficacy. More can be said in favor of cold applied either locally on the stomach by ice-bags, by swallowing ice, or by the ether spray to the spine. Dr. B. mentions especially the early use of *arsenic.* He adds that whatever remedy is tried, unless it acts promptly with benefit, it should not be persisted in.

2. *Operative Treatment.* In plethoric cases, where the menses are abundant, a general bleeding may alleviate the symptoms. Local bleedings from the os may be substituted in other cases. Vaginal injections of alum or acetate of lead may follow these incisions. Slight cauterizations of the os with tincture iodine or nitrate of silver may take the place of the incisions. Narcotic ointments, as of belladonna, aconite, camphor, opium, chloro-

* *Vomito nella Gravidanza*, Monograph, p. 48. Naples, 1880.

form, etc., may be applied to the os. If there is displacement of the uterus, this should be restored. Other procedures are large cups to the epigastrium, compresses wet with laudanum, narcotic plasters or ointments, hypodermic injections of morphia, etc.

3. *Diet.* The patient should be directed to prefer a meat diet, small in quantity, and to take food more frequently than usual. Longings, however, for unusual articles, should be satisfied. In severe cases it may become necessary to support the patient by nutritive injections. One of the best is to chop fine a sweet-bread, beat it up with glycerine, and add an equal amount of lean, raw beef, free from fat and fibre, and thoroughly triturated. A syringe, with a large nozzle, is required.

4. *Hygiene.* This must be governed by the circumstances of the case. Some patients suffer less in motion, others when at rest, some during excitement, others when quiet. In all such respects their preferences should be consulted.

When, as will occasionally be the case, all the above means fail and serious danger is threatened from debility, there should be no hesitation to proceed to artificial abortion.

### DR. J. MARION SIMS.

This eminent gynecologist observes that, with our present knowledge of the treatment of this affection, we should hear no more of deaths from pregnancy-vomiting, nor even of miscarriages induced to save the lives of mothers. To the writings of GRAILY HEWITT, JONES and COPEMAN, we are indebted for direct and practical methods of treatment, which seem to promise success in the management of these troublesome cases. Yet these methods are not without a certain amount of risk, and must be cautiously tried. In GRAILY HEWITT'S plan we must be careful not to make undue pressure on the cervix uteri with the pessary. In Dr. JONES' plan we must place the patient in the left lateral semi-prone position, apply a Sims' speculum, expose the cervix without touching it with the speculum, and then

pencil the caustic solution on the granular surface, and on that alone. In COPEMAN'S plan we must gently insinuate the end of the index-finger in the os tincæ, and pass it into the cervical canal not more than three-fourths of an inch deep. This is to be done with the patient on her back. If the uterus should be flexed anteriorly, (as it usually is in such cases,) the operator must not throw the fundus up and push it back toward the promontory of the sacrum with the bi-manual method; for this bi-manual pressure in the early months of pregnancy may provoke abortion. Of course we should not resort to this heroic method of treatment unless the case is urgent and rebellious.

### DR. JOHN S. WARREN, OF NEW YORK.

In summing up his experience in this complaint, this writer (*Med. Record*, March, 1881,) states that its treatment resolves itself into the correction of all disturbances, functional or organic, as far as possible, which are known to excite dyspeptic symptoms, before a simple irritation becomes a confirmed gastritis, and the stomach refuses to receive remedies most appropriate to relieve the original trouble. Among these, oftener than any others, the emotional element and a constipated habit, with its attendant flatulence and discomforts, accompany the pregnant state, and should receive early and prompt attention. For the relief of the former, no remedies at this time equal in efficiency the *bromides of sodium* and *potassium* exhibited in full doses. And here it may not be amiss to state, that in order to secure their full effect these medicines must be administered at the proper time, generally late in the day or at bedtime, and when the stomach is empty.

The constipation can be overcome by any simple laxative, as the comp. liquorice powder, or any other harmless medicine or formula; or, if obstinate, copious and repeated enemata of tepid water will unload the rectum of the hardened fæces or scybala which so frequently occur in women.

Finally, when all other causes are excluded, the constipation

relieved, and the emotional element controlled, and we come to consider the purely sympathetic disorder following conception; in short, when we have to deal with the uncommon vomiting, due simply and solely, so far as we can see, to the impregnation of a healthy uterus in a healthy woman, many of the remedies which have been called specifics do sometimes relieve, but oftener fail. But the one remedy which, in his hands, has before all others proved the most efficient for alleviating the distress, if not for curing the complaint, is *Fowler's solution of arsenic*, administered in drop doses upon an empty stomach. When thus given, and with a restricted diet, it has seemed to come nearer to a specific for this neurosis than any other. Indeed, the effect is at times almost magical, and when continued for a considerable period, and given in larger doses when the stomach contains food, affords, in my opinion, a nerve tonic highly essential to women in the pregnant state, and which no other remedy can equal.

Frequently, however, after its continuance for a considerable time, benefit comes from suspending its use and substituting the nitro-muriatic acid with tinct. nux vomica, particularly if there be any inactivity of the liver or kidneys, or anorexia exists.

### PROF. G. TARNIER, PARIS.

In slight vomitings, some aromatic infusion or tea will generally relieve. When they occur after a daily meal, it is useful to change the order of the repast. Thus if, as is usual, the vomiting is very copious after the evening meal, the woman should make merely a light repast, and eat more at breakfast. Cold food is least likely to be ejected. Ices, aerated waters, or small pieces of ice may be taken with the best results. The *subacetate of bismuth*, in doses of a grain or half a grain before each meal, is very beneficial; or after the meal, two or three teaspoonfuls of Kirsch. In obstinate cases, a pill, or two or three centigrammes of *aqueous extract of opium*, may be given an hour before the meal, and to prevent constipation, a slight purgative occasionally.

Where the vomiting is accompanied with pain and tension at the epigastrium, lotions of laudanum are useful; or a small blister, subsequently powdered with one or two centigrammes of the muriate or acetate of *morphia*. DEZON has succeeded by the application of cold water to the epigastrium. *Alcohol* to a slight intoxication has proved successful; hence champagne frequently at once gives relief. BRETONNEAU has calmed the irritability in grave cases by frictions on the stomach with a concentrated solution of *belladonna*. TARNIER applied this in a very bad case in the form of the extract to the inferior segment of the uterine neck and the vaginal walls with the best results.

STACKLER has succeeded with the *black oxide of mercury*, 5 centigrammes daily, without salivation. EULENBERG applied *tincture of iodine* to the os. RICORD and BACARISSE also gave 50 centigrammes of *iodide of potassium* daily, and with equal success. The salts of *cerium*, particularly the oxalate, are extremely useful in doses of 5 centigrammes, 3 or 4 times a day.

Obstinate constipation generally is present with the vomiting. Hence he gives *scammony*, 50 centigrammes, with 1 grain of *jalap* at bed-time. If the first is vomited, repeat it immediately, and even a third dose. Generally the second or third will be retained and act purgatively. When an examination reveals a retroversion of the uterus, generally its replacement will at once put an end to the vomitings.

In cases likely to prove fatal, especially when the pregnancy has advanced to a point that assumes the vitality of the child, premature labor may be deemed necessary.

WM. LEISHMAN, M. D., LONDON.

Breakfasting in bed and not rising for awhile often speedily relieves the trouble. In cases where the bowels are sluggish, the granular effervescing *citrate of magnesia* is useful, or the "potion de Riviere" given so that the effervescence occurs within the stomach:

282. ℞. Acid. citric. gr. xxxvj.
Syr. simp., f.℥ j.
Aquæ, f.℥ ij. M

283. ℞. Potassii bicarb., gr. xxxvj.
Aquæ, f.℥ iij. M.

A tablespoonful of each to be taken successively. When there is exhaustion, stimulants are required. Pepsin is valuable. Often simple milk, and lime-water, and barley-water, (especially the latter,) are retained in very grave cases. Nutritive enemata may be employed to sustain the failing powers or inunctions of cod or other oils.

DR. ALBERT EULENBERG, BERLIN.

284. ℞. Tincturæ iodinii, ♏ xv.
Alcoholis, f.℥ iij. M.

Give three drops several times a day, in a tablespoonful of an aromatic infusion.

285. ℞. Tincturæ iodinii, gtt. x.
Aquæ destillatæ, f.℥ iij.
Syrupi aurantii corticis, f.℥ j. M.

A teaspoonful, or even a tablespoonful.

Other approved prescriptions are:

286. ℞. Bismuthi subnitratis, ℥ iij.
Acidi carbolici, gr. iv.
Mucilaginis acaciæ, f.℥ j.
Aquæ menthæ piperitæ, f.℥ iij. M.

A tablespoonful three or four times a day.

287. ℞. Atropiæ sulphatis, gr. ij.
Aquæ destillatæ, f.℥ j. M.

Two drops in water, before meals.

288. ℞. Cerii oxalatis, gr. x.
Bismuthi subnitratis, gr. xxx. M.

Make ten powders. One five or six times a day.

Sometimes a rectal injection of *chloral hydrate*, gr. xxx., morning and evening, will effectually control this symptom. *Bromide of potassium*, ℈j., thrice daily; *chloroform*, gtt. ij., in mucilage, and medicated pessaries, may also be tried. Dr. E. Copeman,

of Norwich, Eng., claims invariable success to follow dilatation of the os uteri with the finger, once often being sufficient to relieve the nausea completely. (*British Medical Journal*, May 25th, 1875.) A somewhat similar plan is that suggested by Dr. M. O. JONES, of Chicago, to wit, painting the os and cervix with tincture of iodine, or cauterizing them with solid nitrate of silver. This plan has met with great success in obstinate cases, and has been endorsed by Dr. J. MARION SIMS. (See p. 326.)

W. STUMP FORWOOD, M. D., OF DARLINGTON, MD.

This practitioner recommends the following as almost a specific in the vomiting of pregnancy. (*Half-Yearly Compendium*, vol. III., p. 96):

| | | | |
|---|---|---|---|
| 289. ℞. | Columbæ, | ℥ ss. | |
| | Sennæ, | ʒ j. | |
| | Zingiberis, | ℥ ss. | |
| | Aquæ bull., | ℥ j. | M. |

A wineglassful three times a day.

HENRY F. CAMPBELL, M. D., OF AUGUSTA, GA.,

Has called attention to the importance of rectal *alimentation* in the nausea and vomiting of pregnancy, not merely as a last resort, but as an expedient for supplementing inadequate nutrition by the stomach in moderately severe cases. (*Trans. Am. Gyn. Soc.*, 1878.) He uses about eight ounces of beef tea, or other nutrient liquid, twice daily, injecting it very slowly and gently, so as to avoid exciting the lower bowel to expulsive efforts. To supply fluids, during the intervals of the morning and evening injections, a full goblet of water, not quite cold, was twice given, some hours apart. The results in the instances reported were highly satisfactory, the nutrition being maintained, the nausea abated, and the sympathetic irritation of the stomach relieved.

## RÉSUMÉ OF REMEDIES.

### INTERNAL REMEDIES.

*Acidum Hydrocyanicum Dilutum*, gtt. v., is a valuable sedative.

*Aconitum.* A few drops of the tincture of aconite will relieve some cases.

*Armoracia.* Dr. TILT recommends a small portion of horse radish scraped fine, and moistened with vinegar.

*Arsenicum.* Single-drop doses of Fowler's solution will sometimes afford astonishing relief.

*Atropia* has been used with advantage. (F. 287.) WM. BOYS, M. D., Waverly, Iowa, in the *Med. Brief*, Oct., 1879, gives the following:

290. ℞. Atropiæ sulph., gr. j.
Morph. sulph., gr. iv.
Ac. sulph. arom., f. ʒ iij.
Aquæ, f. ʒ v. M.
Dose, gtt. x.–xx., three times a day.

*Belladonna*, in ten-minim doses of the tincture, is recommended by TILT and others.

*Bismuthi Phosphas.* M. TEDENAP, of France, considers this superior to the subnitrate. It acts in smaller doses, being more soluble, and is applicable to the same condition for which the subnitrate is employed. The dose is one or two grains for an adult.

*Bismuthi Subnitras* will be found at times an efficient sedative. (F. 286.)

*Calumba*, according to PHILLIPS and BARTHOLOW, will frequently allay the nausea and vomiting.

*Carbolicum Acidum*, in drop doses of the crystallized acid, in mucilage, thrice daily, has been recommended by English writers.

*Cerii Oxalas* has attained great favor. Dr. F. E. IMAGE (*Practitioner*, June, 1878,) prefers this formula:

291. ℞. Cerii oxalatis,
Pulv. trag. comp., āā gr. x.
Tinct. aurant., f. ʒ ss.
Aquam, ad f. ʒ j. M.
For one dose as required. It is often given in too small a dose. gr. x. is required.

The *nitrate of cerium* has also been used.

*Chloral Hydras*, in simple nervous erethisms of the stomach, often acts promptly; gr. xxx., in mucilage, for a rectal injection, is the best form of administration.

*Chloroformum* may be given in doses of a few drops in a spoonful of milk. Sir C Locock recommended repeated chloroformization almost to insensibility.

*Creosotum* should, according to Dr. Ringer, be given in very small doses; for instance, added to water, so that the latter tastes of it, and then a dessertspoonful of the fluid taken from time to time.

*Cupri Sulphas*, gr. iv. to aquæ f. ℥j. Six drops at a dose will sometimes relieve. (Bartholow.)

*Ether.* A few drops at a time in water, or inhaled, will at times relieve the nausea. The spine has also been sprayed with the ether spray with most excellent results, by Dr. Dubelski, of Warsaw.

*Hydrargyrum Chloridum Mite.* Dr. Tilt occasionally administers gr. x.–xv. of calomel for its sedative action; or combines it in smaller quantities with opium.

*Hyoscyamus.* Dr. Pitois, Professor at the Medical School at Rennes, reports two striking cases of relief by hyoscyamia. After trying, unsuccessfully, all the usual means, he administered a teaspoonful every hour of a mixture containing 5 milligrammes of hyoscyamia in 125 grammes of fluid. The next day the vomiting ceased.

*Ingluvin.* This substance, used to facilitate digestion, has been favorably reported upon.

*Iodinium*, in drop doses of the tincture every hour or two, will, according to Bartholow, sometimes greatly relieve this symptom.

*Ipecacuanha.* Dr. C. Fuller (*Lancet*, Dec. 4th, 1869,) introduced the treatment of vomiting of pregnancy by single drop doses of wine of ipecac. in a teaspoonful of water every hour. Others have also reported favorable results from this plan.

*Lactopeptin.* This peptic compound has in a number of instances relieved the nausea and vomiting.

*Magnesia* in small quantities occasionally affords relief.

*Nux Vomica*, in tincture, gtt. v.–x., as required, is relied upon by PLAYFAIR and others. BARTHOLOW says it is best adapted to cases with much nausea and little vomiting, in doses of half a drop to a drop.

*Opium and Morphia* are, according to TILT, the first remedies to be tried. He recommends suppositories containing gr. ij.–iij. of extract of opium, or gr. j. morphiæ acetatis; or the drug may be given by the mouth Inquiry, however, must be made as to the idiosyncrasy, as it is well known that any form of opium produces vomiting in some persons. Dr. ATTHILL combines morphia with atropia for a hypodermic injection:

| | | | |
|---|---|---|---|
| 292. ℞. | Morphiæ acetatis, | gr. viij. | |
| | Atropiæ liquoris (B. Ph.), | ♏xlviij. | |
| | Glycerinæ, | ♏v | |
| | Aquam, | adf. ʒiv. | M. |

Dose, five to ten drops for a hypodermic injection.

*Pepsina*, either as wine or in other forms, will often succeed.

*Potassii Bromidum*. Dr. S. C. BUSEY, Washington, D. C., (*Amer. Jour. Med. Sci.*, January, 1878,) has obtained decided and immediate relief from the bromide of potassium. He gives 30 grains to a drachm, dissolved in beef-tea, to which brandy and laudanum may be added, according to the condition of the patient. He gives it in enemata every four hours. Dr. FREIDRICH, in *Deutsches Archiv. für Klin. Med.*, Nov., 1879, states that he considers the action of bromide of potassium, given in doses of from one to two grammes a day, so valuable that he would be almost disposed to say that we possess in bromide of potassium a specific remedy against the obstinate vomiting of pregnancy, if it were permissible to speak of specifics in such a case.

*Potassii Iodidum* is occasionally of service.

*Salicin* has been occasionally found to be of service.

*Strychnia*. Dr. TILT strongly recommends:

| | | | |
|---|---|---|---|
| 293. ℞. | Strychniæ, | gr. ½. | |
| | Tinc. zingiberis, | f.ʒvj. | |
| | Aquæ, | f.ʒiv. | M. |

Dose, a teaspoonful every one or two hours.

*Tannicum Acidum*, in the form of a pill, gr. i.–ij., morning and evening, has been found very successful by Dr. DIBOVE. (*Arch. de Tocologie*, Sept., 1877.)

*Stimulants.* Recourse must be had to these cautiously, on account of the relief they sometimes give, leading to the habit of tippling. When accessible, the best is probably dry champagne, iced, of which tablespoonful doses may be given every fifteen minutes.

*Tobacco-smoke* has been recommended by GROS. It may be inhaled, or may be injected against the os.

### LOCAL MEASURES.

*Caustics.* Dr. J. MARION SIMS believes that the treatment should always be directed to the seat of the irritation, and claims the best results from the use of caustic to the os; two or three applications generally suffice. This method he employs even when there is no sign of erosion of the mucous lining of the os, and the parts appear perfectly healthy. Dr. F. D. LENTE (*Med. Record*, 1879), agrees with Dr. SIMS, and freely touches the os and cervix with the nitrate of silver. He quotes Dr. M. O. JONES, Chicago, as using this method with the best possible result, and where, in the majority of cases, the os presented no signs of disease. Dr. PLAYFAIR considers the measure hazardous.

*Cold*, applied to the epigastrium, or by swallowing pieces of ice, is often beneficial.

*Electricity.* Dr. T. GAILLARD THOMAS, of New York, employs electricity. He fixes one broad flat electrode, made by stitching a flat sponge to sheet rubber, by means of adhesive plaster on the epigastrium, and a similar one under the spine, the patient lying supine. Then a gentle current is passed, and continued steadily for ten, twelve, or even twenty-four hours. He has seen no evil result, and esteems this remedy higher than any other.

Dr. DA VENEZIA relates in the *Giornale Veneto di Scienze Med.* (January, 1879,) a case of chronic nervous vomiting in pregnancy which was cured by electricity. The patient was a young woman aged twenty-four, in the seventh month of her first pregnancy. She had been suffering for the last two years from frequent

attacks of vomiting after food, which had been so frequent during the last month, that she had become greatly reduced in strength. The usual therapeutic agents were then employed; but, as no relief was obtained through them, the author resolved to try electricity. A faradic current of moderate strength was used, one of the rheophores being applied to the side of the neck along the course of the vagus nerve, and the other to the epigastrium. After the first sitting the patient was better, and after the fourth the vomiting ceased.

*Heat.* TANNER mentions hot fomentations to the epigastrium and hot poultices, as occasionally useful.

*Injections*, either rectal or vaginal, are efficient means. Those containing opium are most useful. In the Boston *Medical and Surgical Journal*, 1879, Dr. GREENE, of Dorchester, advocates the use of warm vaginal lavements for many cases of obstinate vomiting of pregnancy. He also reports a case where warm olive oil succeeded after the water had failed.

*Leeches* to the os have been used by CLAY, but their propriety has been doubted by PLAYFAIR. Dr. TILT mentions that in some cases the vomiting has been promptly checked after the failure of ordinary measures, by the application of a few leeches to the pit of the stomach, although there were no signs of inflammation there, and the patient was not plethoric.

*Suppositories*, both rectal and vaginal, containing opium or its alkaloids, are among the earliest resources indicated As a medicated pessary, Dr. TANNER prescribes:

294. ℞. Extracti belladonnæ, gr. xxv.
Extracti hyoscyami, gr. lxxx.
Plumbi iodidi, ʒj.
Theobromæ cocoæ, ʒj.
Olei olivæ, f.ʒij. M.

For eight pessaries. One to be introduced into the vagina every night.

*Oxygen Inhalations.* In some obstinate cases Dr PINARD tried, with immediate relief, inhalations of oxygen, led thereto by the fact that the vomiting of chlorotic subjects is often relieved by this means. (*Annales de Gynecologie*, May, 1880.)

# SYMPATHETIC NERVOUS DISORDERS.

**These are palpitation of the heart, headache, syncope, cough, neuralgia, pruritus, and other cutaneous diseases, hypochondriasis, affections of the sight, etc.**

### PROF. W. S. PLAYFAIR, M. D., LONDON,

For the *palpitation*, would give ferruginous preparations, and a general tonic regimen. When it does not seem to result from debility, antispasmodics are indicated.

*Syncope* occurs generally in women of a highly-developed nervous temperament, and generally about the time of quickening. The treatment should consist in the use of diffusible stimulants, as ether, ammonia, and valerian, the patient being recumbent with the head low. In the intervals, tonics and iron are necessary.

*Neuralgia* is generally controlled by tolerably large doses of quinine. If caries of the teeth are present, the affected tooth should be removed without fear. Nitrous oxide gas may be administered without difficulty or risk.

### ELY VAN DE WARKER, M. D., OF NEW YORK.

This writer extols the black cohosh, *cimicifuga racemosa*, for the nervous disorders of pregnancy. (*Half-Yearly Compendium*, vol. XIII., p. 176.) He says:

"Women are oftentimes the subjects of distressing symptoms as pregnancy advances. Among these are a train of nervous symptoms: Restlessness, sleeplessness, darting pains in the back, flanks and thighs, and stiffness and soreness in movement, are very common and troublesome. For these conditions I find *black cohosh, cimicifuga racemosa*, a sovereign remedy. I give thirty minims, or half a teaspoonful, of the fluid extract at bed-

time, in cases of restlessness; and in cases of neuralgia of the lumbar or abdominal muscles, or in cases of stiffness or soreness in movement, the extract may be given in the same amount, at intervals of three to five hours during the day."

THOMAS H. TANNER, M. D., LONDON.

The headaches of pregnancy are usually due either to debility or to sympathy. The first is dull and steady, the skin cool, and the pulse feeble. Its successful management demands quinine and iron, good diet, exercise, and general hygiene. The sympathetic headache is generally limited to a small space, or a single spot. The pain is acute and penetrating. The treatment is a moderate purgative followed by tonics. The extract of *aconite*, gr. ss., every four or six hours, sometimes gives prompt relief in such cases.

In puerperal cases, *insomnia* is not unfrequently the precursor of delirium or mania. It demands, therefore, careful attention, and, if persistent, the cautious use of hypnotics.

Groundless despondency, *hypochondriasis*, is not very unusual during the period of gestation. The bowels should be acted on with rhubarb and soda, pepsin taken after the meals, and a tonic, such as the following, be prescribed:

295. ℞. Spiritûs ammoniæ aromat., f.℥ iij.
Spiritûs chloroformi, f.℥ ij.
Ferri et quiniæ citratis gr. xxx.
Liquoris strychniæ, ♏xxx.
Tincturæ zingiberis, f.℥ ij.
Aquam, ad f.℥ viij. M.

A sixth part two or three times a day.

Sometimes the union of the tonic with an alterative is desirable, as:

296. ℞. Ammonii muriatis, gr. lx
Extracti cinchonæ liquoris, ♏xc.
Vini rhei, f.℥ vj.
Aquam menth. piper., ad f.℥ viij. M.

A sixth part twice daily.

The moral management of such cases is also important. Positive assurances of the future must be given; the demeanor must be humane and sympathizing; and she must be guarded from scenes and tales of suffering.

Pregnant women toward the eighth month are sometimes subject to sudden attacks of intensely acute *pain in the right side.* The treatment should be to make the patient lie on her left side, cover the region of the pain with hot fomentations containing belladonna and opium, and administer a full dose of an anodyne and carminative mixture. As long as any pain remains, she should keep her bed, and lie on the left side.

The sympathetic *nervous cough* of pregnancy comes on in violent paroxysms, especially at night, without expectoration or stethoscopic signs. In its treatment, he has found antispasmodic mixtures like the following to give great relief:

| | | | | |
|---|---|---|---|---|
| 297. ℞ | Spiritûs etheris, | | f.℥ iij. | |
| | Tinct. chloroformi comp., | | f.℥ j. | |
| | Acidi hydrocyanici diluti, | | ♏xv. | |
| | Liquoris morphiæ sulphatis, | | f.℥ j. | |
| | Tinct. cardamomi comp., | | f.℥ vj. | |
| | Aquam, | ad | f.℥ viij. | M. |

A sixth part every six or eight hours.

Or,

| | | | | |
|---|---|---|---|---|
| 298. ℞. | Tinct. valerianæ ammon., | | ♏xxx. | |
| | Tinct. sumbulis, | | ♏xx. | |
| | Tinct. belladonnæ, | | ♏x. | |
| | Tinct. camph. comp. | | ♏xxx. | |
| | Aquam camphoræ, | ad | f.℥ xij. | M. |

For one dose.

Efforts must be continued to check the cough when violent, as its continuance sometimes leads to abortion.

## CUTANEOUS AFFECTIONS.

### TYLER SMITH, M. D., LONDON,

Regards *pruritus* as the result of follicular irritation of the

vulva. The secretion from the surface is generally very acid, which may be relieved by washing with common yellow soap. Dilute hydrocyanic acid, Battley's solution, of each f. ʒ ij., and carbonate of soda, ʒ ij., water f. ʒ vj., make an excellent wash, using only a tablespoonful at a time. A lotion of borax is good; sometimes an acidulated lotion is preferable, or a lotion of tar-water. In obstinate cases, paint the vulva with nitrate of silver, ten grains to water one ounce, every day or every other day; or with tincture of iodine with an equal part of water. Where the os uteri is thus troubled, inject the lotion of borax or nitrate of silver. Tepid or cold bathing, cooling diet, and aperients, are also aids in the cure. Should it assume a periodic form, quinine is the remedy.

PROF. W. S. PLAYFAIR, M. D., LONDON.

*Pruritus* is frequently associated with leucorrhœa of an acrid nature; or there may be aphthous patches on the mucous membrane, ascarides in the rectum, or pediculi in the hairs of the mons and labia. Sedative lotions are useful, as Goulard's, or an ounce of the solution of muriate of morphia with a drachm and a half of hydrocyanic acid in six ounces of water; or chloroform, one part to six of almond oil. A pledget of cotton-wool soaked in equal parts of glycerine of borax and sulphurous acid, may be placed in the vagina at bed-time, and removed in the morning. In obstinate cases, the solid nitrate of silver may be brushed lightly over the vulva. Generally the aperient mineral waters and bromide of potassium aid in the cure.

PROF. S. TARNIER, PARIS,

Gives this formula:

| | | | |
|---|---|---|---|
| 299. ℞. | Deutochloride of mercury, | 2 grammes. | |
| | Alcohol, | 10 " | |
| | Rose water, | 40 " | |
| | Distilled water, | 450 " | M. |

He employs this night and morning thus: Bathe the parts with warm water to remove any discharges, then, having carefully dried the surface, rapidly sponge the seat of the affection with the lotion. In a few minutes, wash again with fresh water. The cure is generally rapid.

Occasionally a dose of *pilocarpin* has been found promptly to relieve the troublesome symptom.

[For further suggestions regarding the Pruritus of Pregnancy, see part I., chap. III., under Pruritus of the Vulva.]

One of the most common of cutaneous affections are *Ephelides*. Prof. NEUMANN recommends for them:

| | | |
|---|---|---|
| 300. ℞. | Acidi chrysophanici, | 1 part. |
| | Adipis, | 40 parts. M. |

Gently anoint the part, previously washed with soap and water; then apply a piece of linen, to prevent staining. Repeat the application three or four times at two days' interval, being careful not to touch the eyelids and not to apply too strong an ointment on persons of delicate skin. The parts to which it is applied become red, then black; the skin desquamates, and the stain disappears. The same remedy may be used for pigmentary stains occurring independently of pregnancy.

*Urticaria* and *herpes gestationis* are other forms of skin disease associated at times with the pregnant condition. Their treatment at that period is often more delicate and less successful, but in general principles is not different from under ordinary conditions.

## AFFECTIONS OF THE EYE.

The diseases of the eye occurring in connection with pregnancy, have been studied by Mr. HENRY POWER. (*Lancet*, May, 1880.)

He commences by reviewing the physiological changes induced by pregnancy, and concludes that the quantity of blood, though

increased absolutely, is not relatively, and that in pregnancy a condition of general anæmia is far more commonly met with than one of hyperæmia.

From an examination of the various cases which have fallen under his notice, he would classify the diseases of the eye in connection with pregnancy under three heads, namely: 1. Affections depending on general anæmia and exhaustion; 2. Those consequent on some special lesion of the nervous system; 3. Those depending upon, or rather associated with, albuminuria.

Among diseases attributable to exhaustion, the most common are ulcers of the cornea, which may be either spontaneous or arise from some slight injury. They are often central, are slow in their progress, and are not usually dangerous. The treatment may be summed up in two words, *rest* and *tonics*. The former indication may be fulfilled by a two or four-grain solution of atropine or eserine, and the application of a pad of cotton-wool and a bandage; the latter by quinine. During lactation, a more dangerous form of ulcer is often met with, causing destruction of the cornea, with eventually atrophy of the globe. Paracentesis corneæ is often required in such cases.

Another sign of exhaustion in pregnancy is impairment of the power of accommodation, due to enfeebled action of the ciliary muscle. Glasses, in suitable cases, will necessarily be required, but much good also may be effected by tonics, especially strychnia in small doses. As regards special lesions, the author has witnessed what he considers an increased tendency to lachrymal abscess, and to the development of cataract. Lesions of the nervous system, or lesions implicating the nervous apparatus of the eye generally, he divides into two groups, the intra and the extra-ocular. The former affect the retina, the latter the optic nerves, chiasma, optic tract, and central ganglia. The retinal affections are almost limited to cases of albuminuria, though, also, cases of hemorrhagic glaucoma, and miliary hemorrhages unconnected with albuminuria in pregnancy have been noted by GALEZOWSKI. Two cases are recorded by the author, in which

retinal hemorrhages during pregnancy passed off harmlessly, and one in which they were of fatal significance.

As regards the treatment of such cases, it is the same as that of retinal disease generally, no special treatment being demanded for the eyes. Some writers have recommended the induction of premature labor in these cases, but the author considers more data are required before a positive opinion can be pronounced, more especially as to the period when labor could best be induced. As regards intracranial diseases in pregnancy, the author suggests they could almost be classed under the head of "anomalous affections." He gives the histories of cases of partial or complete loss of vision from post-partum hemorrhage, and explains such either by abolition of the circulation in some portion of the cerebrum, or by some lesion of the delicate tissue of the central nervous system from sudden diminution of pressure. Many such cases, eventually resolve themselves into atrophy of the optic disc.

# DIGESTIVE DERANGEMENTS OF PREGNANCY.

## GINGIVITIS, PUERPERAL SALIVATION.

Dr. A. PINARD, of the *Clinique d'Accouchement*, of Paris, (*L'Abeille Méd.*, Jan., 1878,) remarks that in many cases of pregnancy the gums are the seat of more or less morbid phenomena. They are redder and more congested than normally; they are swollen; the edge of the free border, especially the inter-dental membrane, covers a part of each tooth. The slightest pressure exerted on this edge, causes a slight hemorrhage. At a more advanced degree, the teeth lose their solidity. The mastication, at first injured, becomes more painful and more difficult as the lesions are more pronounced.

For the relief of this condition, he has used:

301. R. Chloral hydratis,
Tinct. cochleariæ off., āā partes equales.

Apply daily, or every other day, to the diseased edge of the gums, with a mop.

This dressing is slightly painful, and the cauterization very light. The eschar disappears generally twenty-four or thirty-six hours after the application. In thirty women attacked with gingivitis, who were subjected to this treatment, twenty-five were cured in less than fifteen days. In two of them the cure was slower, complications having supervened which necessitated the use of mercurial ointment. In five others the treatment could not be continued.

Dr. THOMAS H. TANNER remarks that some writers say the salivation should not be checked; but he distrusts this view. He has found small blisters behind the ears or to the neck more efficient than any other remedy. Local remedies are seldom of use; one of the best is:

302. R. Sodii boracis glycerini, f.℥ ij.
Aquæ rosæ, f.℥ vj. M

For a gargle. To be used twice daily.

*Belladonna* is the only internal remedy he has seen diminish the discharge, but this often fails. Chlorate of potassa may be tried.

### DIARRHŒA

Occasionally is present, and PLAYFAIR regards it as due to errors of diet. It should not be neglected, as it may bring on labor prematurely. The chalk mixture, with aromatic confections and small doses of clorodyne and laudanum, will generally check it.

LEISHMAN counsels the removal of any fæcal accumulations by castor oil and then the use of astringents.

### CONSTIPATION.

LEISHMAN regards this as due to the pressure of the womb on the bowel, reducing its calibre and paralyzing its muscular fibres. In other cases, a want of bile occasions it. If clay-colored stools show this, a few grains of blue pill will do good.

PLAYFAIR suggests appropriate diet, as fresh fruits, brown bread, oatmeal, etc. The aperient mineral waters answer well, and an occasional dose of confection of sulphur; or a pill of three grains of extract of colocynth, quarter of a grain of extract of nux vomica, and a grain of extract of hyoscyamus at bed-time; or a teaspoonful of compound liquorice powder, at bed-time. This condition is effectually combated by giving, twice a day, a pill of two grains of inspissated ox-gall with a fourth of a grain of extract of belladonna. Enemata of soap and water are good. Scybalæ must be broken up and removed by mechanical means.

Dr. W. CRAIG, Edinburg, (*Edinburg Med. Jour.*, June, 1875,) has found the following an excellent pill for the constipation so common in females of a sedentary habit:

303. ℞. Aloin, gr. ss.
Ferri sulph. exsic., gr. iss.
Extract. nucis vomicæ,
Extract. belladonnæ, āā gr. ss. M.

Ft. pil. One or two pills daily.

Another writer gives:

| | | | |
|---|---|---|---|
| 304. ℞. | Ext. colocynth comp., | gr. xij. | |
| | Pulv. rhei, | gr. vj. | |
| | Ext. belladonnæ, | gr. iss. | |
| | Ext. hyoscyami, | gr. iij. | M. |

Divide into six pills. One at bed-time. Gr. $\frac{1}{30}$ of strychnia may be added to each pill.

### ICTERUS GRAVIDARUM.

Dr. J. Wickham Legg,* in a recent work, states that this form of jaundice usually comes on toward the end of pregnancy, and then lasts till after delivery. When simple in form, the treatment should not be active. The bowels must be regulated by mild laxatives, and small doses of the alkaline soda salts given by the mouth as well. The older writers specially note that emetics must not be employed, on account of the danger of causing abortion.

There is one form of jaundice in which abortion is very common. This is a species of *icterus gravis*, and at times is of the nature of an epidemic. Nearly all attacked with it miscarry, and a certain proportion of them die with it. The phenomena of the disease do not appreciably differ from those of ordinary acute yellow atrophy. The treatment should begin with a smart mercurial purge, followed by sulphate of magnesia or soda. This may be followed by quinine in large doses, with an admixture of the mineral acids. Locally, a warm linseed poultice over the epigastric and right hypochondriac region. The prognosis is grave.

### HEMORRHOIDS.

Leishman says the treatment must be purely palliative. Sponging with water; fomenting with sponges wrung out of hot water, and applied as hot as they can be borne; applications of ung. gallæ cum opio; and cold injections for hemorrhage.

* *On the Bile, Jaundice and Bilious Diseases*, 1880.

CAZEAUX gives every night a cold enema; when this is evacuated, a second of about one-fourth the quantity; this to be retained.

PLAYFAIR likes the sulphur electuary. When tender and swollen, he covers the tumors with an ointment of four grains of muriate of morphia to an ounce of simple ointment.

R. P. HARRIS, M. D., adds to the ung. gallæ cum opio ℥j., ext. of stramonium 3j. The tumors should always be returned carefully within the spincter, and punctured, if necessary, to lessen the congestion, prior to the attempt at reduction.

TARNIER relieves the constipation, then uses cataplasms and lotions, emollient and narcotic. When internal, introduce suppositories within the rectum. Opium and belladonna are most useful.

During pregnancy and the puerperal period, hemorrhoids often occur. For them Dr. BARKER recommends the following formula:

305. ℞. Pulv. aloës Soc., Sapo cast., ää ℈j. Ext. hyoscyami, ℥ss. Pulv. ipecac., gr. v. M.

Divide in pills No. xx. SIG.—One morning and evening.

When the hemorrhoids are associated with an irritable rectum, and with frequent small, teasing, thin evacuations, he substitutes for the hyoscyamus a small quantity of opium, giving also a less quantity of aloes, as in the following formula:

306. ℞. Ferri sulph., ℈j. Pulv. aloes, gr. x. Ext. opii aq., gr. x. Sapo cast., gr. x. M.

Ft. pil. No. xx. SIG.—One morning and evening.

Locally he applies the following ointment to the tumors and well up in the rectum twice daily:

307. ℞. Ung. gallæ com., ℥j. Ext. opii aq., ℈j. Sol. ferri subsulphatis, f.℥j. M. ft. ung.

## ALBUMINURIA OF PREGNANCY.

PROF. WM. LEISHMAN, M. D., GLASGOW,

Says antiphlogistics must only be used with the greatest caution. Baths are useful by promoting the function of the skin. Diuretics are of doubtful value.

Dr. J. S. PARRY, the Philadelphia editor, urges the following:

| | | | |
|---|---|---|---|
| 308. ℞. | Tr. ferri chlo., | f. ʒ iij. | |
| | Liq. ammon. acet., | f. ʒ iij. | |
| | Ac. acetic, | ♏ xv. | |
| | Ol. gaultheriæ, | gtt. v. | |
| | Syr. aurant. cort., | f. ʒ j. | M. |

Dose, one to two drachms three times a day.

It is of great importance to recognize the presence of albumen early. Such symptons as œdema, even of the minor form, should always prompt the physician to test the urine for albumen. It may, indeed, exist, and apparently in no way affect the general health. When this is the case, active medication is needless. It will be enough to regulate carefully the diet, and maintain in normal action the secretory functions. Cases which are wholly due to the pressure of the enlarged uterus and its contents, often continue to the close of the pregnancy, and pass through confinement without any untoward accident. The avoidance of interference, therefore, and a watchful supervision of the case, embrace all that the physician is called upon to do. It must be borne in mind that the disease is one of debility, and implies impoverishment of the blood, so that lowering treatment is usually out of place, and tonics and a general diet are rather called for. Occasionally some of the mildest diuretics may be exhibited, but, as above mentioned, their generous use is of questionable propriety.

PROF. W. S. PLAYFAIR, M. D., LONDON.

Saline diuretics, as acetate or bitartrate of potassa, and watery purgatives, as the compound jalap powder, are most useful in promoting the urinary secretion and relieving the renal congestion. Dry-cupping over the loins, frequently repeated, and the vapor or Turkish bath, will aid greatly. The diet should be mainly of milk and white of egg, and a little white-fish. The tincture of perchloride of iron, with the tincture of digitalis, acts well. The induction of labor must depend upon the gravity of the symptoms.

TYLER SMITH, M. D., LONDON,

Believes in small *bleedings* where there is distinct lumbar pain and general febrile excitement, or cups to the loins, or sinapisms. Warm and vapor baths, aided by diuretics, as acetate of potassa, oil of juniper, infusion of broom, will tend to remove the effusion, and cause the kidneys to act. Then tonics, iron, and good diet. Where the phosphatic diathesis exists, we require the mineral acids, opium, and rest.

PROF. S. TARNIER, PARIS,

At the Maternité, has for some years treated albuminuria entirely by *milk*, and with most excellent results. One litre (1¾ pints) of milk, increased to three and four litres a day, are given, and the albuminuria rapidly diminishes or disappears. The effect is shown in a week or a fortnight.

PROF. MONTROSE A. PALLEN, M. D., NEW YORK,

Regards as the correct treatment the relief of the hyperæmia of the kidney by sponging the surface with hot water and alcohol, and by keeping the pores open with vaseline inunctions; to this may be added the hot-air or Turkish bath; milk is given as the

most digestible food; koumiss was added because of the very slight amount of, and easily digested alcohol in it. The patient is to be kept in bed, to maintain the skin at a uniform temperature; massage stimulates the circulation, and equalizes the blood current; cathartic water is the best aperient. If eclampsia is threatened, have recourse to chloroform, and bleeding.

PROF. EDW. S. DUNSTER, M. D., ANN ARBOR, MICH.

In treating of the *prophylaxis of puerperal* convulsions, this author suggests in albuminuria, the relief of the congestion of the kidneys by causing the skin to act; he gives bitartrate of potassa, compound jalap powder, citrate of magnesia, and sulphate of magnesia acidulated with sulphuric acid, and the natural mineral waters. He promotes diaphoresis by the vapor and hot-air bath, or the Turkish bath, if accessible. Vichy and Seltzer waters are well borne. Cupping, wet or dry, over the kidney, particularly when there is pain over it, and the urine is scanty, or smoky. A hard, bounding pulse, severe pains in the head, flushed and hot skin may be met by venesection, though in many instances saline laxatives, freely used, will overcome these symptoms.

Counteract the impoverished state of the blood resulting from the loss of albumen by good nutritious food, fresh air, an appropriate mode of life and tonics. Generally white meats and fish are well borne. Milk is excellent as a diet. The tincture of the chloride of iron is the best tonic. It should be given largely diluted, and not to the extent of blackening the fæces.

Quiet the nervous and digestive disturbances by complete regulation of the habits and mode of life, and an out-door life short of fatigue; constant and cheerful occupation for both mind and body. Avoid opiates, but give nervous sedatives or soporifics that are non-constipating, as chloral, in severe cases. The bromide of potassium and the monobromide of camphor are useful. They ameliorate the condition, and give considerable immunity against convulsions at the time of labor. For the loss of appe-

tite and constipation, pepsin, bismuth, and nux vomica, are serviceable.

Induce premature labor when all else fails.

### DR. A. S. COE, OF NEW YORK.

According to this practitioner (*Am. Jour. Obstetrics*, October, 1878,) when albumen makes its appearance early in pregnancy, there are three important indications to be met: (1) to eliminate the poison as far as possible; (2) to support the patient; (3) to allay the nervous tension, and guard against exciting causes. In the first, acetate or some of the other salts of potassa, with digitalis, acts favorably upon the kidneys, and diminishes the quantity of albumen in the urine. Much of the poison can be eliminated by the action of saline cathartics upon the bowels. The second is best met by a liberal diet, tonics, and iron. To meet the third, absolute rest and quiet are necessary, with the use of opium and bromide of potassium, if an outbreak of convulsions or other paroxysms is threatened. When there is much cerebral disturbance, the application of ice to the back of the head and upper part of the spine answers an excellent purpose.

Convulsions are usually preceded by a rapid accumulation of uric poison in the blood and a scanty secretion of urine, and often the patient is attacked with only a slight premonition of coming disaster. In the treatment of these cases, he has found that sulph. morphia, injected hypodermically, answers the best purpose. He never was able to get satisfactory results from bleeding or the use of chloroform.

### PROF. J. B. FONSSAGRIVES, M. D., PARIS.

This author considers it doubtful whether any direct means are available to combat the superabundance of albumen in the serum; but indirectly much can be done by regimen and diet. One of the most important points is to keep the bowels soluble by laxatives; constipation in such cases must be sedulously

avoided by means of alkaline purgative waters, in doses sufficient to act moderately and no more.

Whether the diet recommended in Bright's disease should also be adopted in the albuminuria of pregnancy, remains an open question. Often by attention to the bowels and general regimen, no such means need be resorted to.

### PROF. KARL R. BRAUN, M. D., VIENNA.

Hydræmia, at an early stage of pregnancy, is ameliorated by nutritious diet, vegetable tonics, and iron, tepid baths, and especially vapor baths. To neutralize the carbonate of ammonia in the blood, make use of benzoic acid, lemon juice, or tartaric acid. To obviate congestion of the head, prevent constipation by vinegar injections, aloes, jalap, etc. When exudation has taken place into the Malpighian capsules, and the tubuli of Bellini and Ferrein, the cylindrical clots must be removed from them, and new ones prevented. If the current of fluid from the bodies into the capsules be strong, then the copious use of diluents will suffice to wash away the clots. But if the urine be scanty and uræmia threaten, then the force of the current must be increased by acids, as above, and Seltzer and Vichy waters. Pills of *tannin* and extract of *aloes* are useful to restore the normal tone.

Premature delivery is not to be thought of, unless uræmia has appeared, and the life is threatened. But it will be rational to resort to this procedure if, from the duration of the disease, its severity, the quantity of cylindrical clots, the great hydræmia, the dropsy, and disturbances of the heart, lungs, brain, etc., cause fear of the existence of great degeneration of the kidneys. Should symptoms indicate the death of the fœtus, operative interference may at once be employed, as its retention greatly adds to the danger to the mother.

### RÉSUMÉ OF REMEDIES.

*Benzoicum Acidum*, gr. v., twice daily, in pill form, has given satisfactory results in uræmic attacks during pregnancy.

*Chloral* has been tried with marked success in a few cases by Dr. E. NOEGGERATH, of New York. (*Amer. Jour. of Obstetrics*, Oct., 1878.) He gave gr.xx.,–xxx. every night, with the result that the albumen immediately began to diminish, and soon disappeared entirely.

*Digitalis.* The diuretic powers of this drug are frequently available. It can often be advantageously used as a poultice, as recommended by Dr. P. C. RUSSELL. (*Brit. Med. Jour.*, Dec., 1878.)

*Ferrum.* The use of ferruginous preparations combined with diuretics is always indicated.

*Hydrargyrum.* All preparations of mercury should be given with great caution in albuminuria, as such patients are intolerant of this drug.

*Jaborandi* and *Pilocarpin* must be used cautiously in these cases, as they have ecbolic properties which may lead to abortion.

*Oleum Juniperi* was preferred by SIMPSON as a diuretic, but has not been approved by others.

*Oleum Tiglii* is occasionally called for in severe cases, to act on the bowels and kidneys.

*Potassii Acetas* and *Bitartras* usually secure an abundant renal secretion.

*Potassii Bromidum* is valuable to relieve headache and control nervous excitement.

*Milk Diet.* A diet of skimmed milk is probably the only remedy now known which has a radical influence on albuminuria.

[On the general treatment of Albuminuria, see the section on Eclampsia, and also NAPHEYS' *Medical Therapeutics*, chap. V.]

# CHAPTER II.

## COMPLICATIONS, DISORDERS, AND SEQUELÆ OF PARTURITION.

*Anæsthetics in Labor—Antiseptics in Labor—Placenta Prævia—Tedious Labor (Rigid Os, Uterine Atony, etc.)—After-Pains—Puerperal Hemorrhage—Puerperal Eclampsia—Puerperal Mania—Puerperal Septicæmia—Thrombosis and Embolism—Shock—Pelvic Cellulitis and Peritonitis (Puerperal Phlebitis and Metritis)—Phlegmasia Dolens—Milk Fever—Puerperal Convalescence—Coccygodynia.*

### ANÆSTHETICS IN LABOR.

PROF. FORDYCE BARKER, M. D., NEW YORK.

Anæsthetics are of great value in preventing lacerations of the perinæum. In that form of rigidity caused by excessive irritability of the muscular fibres, the perinæum relaxes and dilates with remarkable rapidity after the inhalation of chloroform. Where danger arises from violent uterine contractions, profound anæsthesia will save the perinæum. Even in tedious labors, chloroform causes relaxation and a restoration of the normal moisture and temperature of the parts, and efficient action of the uterus is at once resumed.

PROF. KARL SCHROEDER, BERLIN.

Chloroform in labor has the same advantage as in surgical operations. It facilitates all midwifery operations. In parturition, it easily acts in a small quantity, and it is not necessary to pro-

duce complete anæsthesia merely to mitigate pain. A few whiffs relieve the acute pain, and this cannot injure mother or child. Even profound anæsthesia has not been found to influence the child, when continued for a short time.

It does not induce hemorrhage, and reduces the temperature, both favorable effects.

It cannot be questioned that chloroform is advisable in normal parturition to suppress the intense sufferings. Chloral has an equally beneficial effect.

PROF. S. W. PLAYFAIR, M. D., LONDON.

Anæsthesia is a perfectly legitimate means of assuaging the sufferings of child-birth. Chloral may be safely given when chloroform cannot. It does not relax contractions, while it produces a drowsy state, in which the pains are not so acutely felt. Hence, in the first stage, during the dilatation of the cervix, it is most useful; especially in those cases where the pains are intolerably acute, with but little effect on the labor, 15 grains may be given every twenty minutes, for three doses; the patient becomes drowsy, dozes, and wakes up as each contraction commences. Rarely is a fourth dose required. It does not interfere with the use of chloroform, but of that less will be required. It is a very valuable aid in the management of labor.

Chloroform should only be given during the pains, and never to unconsciousness. Watch its effects: if the pains lessen in force and frequency, stop its inhalation, beginning again when the pains are stronger. It is believed that the addition of about one-third absolute alcohol will increase the stimulating effects and diminish its tendency to cause undue relaxation. As the head distends the perinæum, it may be used more freely, and even to complete insensibility just before the child is born.

Ether acts well, and does not relax the uterus, and even seems to intensify the pains.

Bear in mind the tendency of chloroform to produce uterine

relaxation, and hence take extra precautions against post-partum hemorrhage.

In operative midwifery, complete anæsthesia is required, and here the operator should employ the aid of another physician, and his undivided attention should be given to the anæsthetic, while the operator is otherwise engaged.

Dr. ROBERT P. HARRIS, American editor of PLAYFAIR, says that in the United States chloroform is rarely used in midwifery, but preferably pure sulphuric ether. After anæsthesia, uterine inertia is very apt to follow, and the result is post-partum hemorrhage.

### DR. J. K. BARTLETT, OF WISCONSIN.

The method of administering anæsthetics, which this practitioner has found most successful, is as follows (*Trans. Wisconsin State Med. Soc.*, 1879): The anæsthetic should be administered at the very moment the pain is first felt to be coming, or known to be so by the finger in the vagina; the inhalation rapidly continued until the uterine contraction has reached its climax, and then immediately stopped. Inhalations should not be used between the pains, though often urgently desired from feelings of discomfort, especially when their use has just been commenced. He is strongly inclined to the belief that want of attention to this rule has led to some disturbances in the regularity and force of uterine contractions which have been urged against anæsthesia. When a case is first seen when labor is quite advanced and pain severe, it is best to give at once full inhalation to the extent of producing quiet, after which its use can be continued as before stated.

### DR. FRACHAUD

Read a paper before the Section of Obstetrics and Gynecology of the International Medical Congress, on the 11th of September, 1878, on anæsthetics in labor. The following are his conclusions:

(1) The employment of anæsthetics is to be advised, as a general rule, in natural labor.

(2) The principal agents employed at present, are ether, chloroform, amylene, laudanum, morphine by subcutaneous injection, and chloral by the mouth and by enema.

(3) Chloroform is the one he considered preferable.

(4) It should be administered according to the method of Snow, that is, in small doses at the commencement of each pain; and it should be suspended as soon as the pain has passed.

(5) It should never be pushed to complete insensibility, but a diminution of pain only should be aimed at.

(6) It is generally advised to administer chloroform only during the period of expulsion; but in some cases of extreme nervousness and agitation, it is better not to await the complete dilatation of the os.

(7) Experiment has shown that anæsthetics do not stop either the uterine contractions or those of the abdominal muscles, but that they lessen the resistance of the perinæal muscles.

(8) The employment of anæsthetics has no injurious effect on the health of mother or child.

(9) In lessening to a greater or less degree the sufferings of the woman, anæsthetics are of great service to those women who dread the pain; it lessens the probability of their having nervous attacks, and hastens their convalescence.

(10) Anæsthetics are extremely useful to calm the extreme agitation and control excitement which labor often causes in very nervous women.

(11) Their employment is indicated in cases of natural labor, which is suspended or retarded by the sufferings caused by previous disease, or that coming on during the labor, and in cases where irregular and partial contractions occasion great suffering without advancing the labor.

(12) Chloroform should not be employed in natural labor without the consent of the woman and her friends.

M. Courty spoke in high terms of M. Frachaud's paper, and stated that he agreed with him in every particular.

PROF. F. CHURCHILL, M. D., DUBLIN.

In most obstetric operations, anæsthesia is of value to relax the soft parts and moderate uterine action, etc.

The dose should be administered at each pain, and increased when the head is passing the perinæum. The anæsthetic state may be kept up for hours without mischief. The best mode is by a clean white handkerchief, folded funnel shape, into which a drachm and a half of chloroform is poured; this is placed over the mouth and nose, and it is a good plan to let the patient hold it herself, as thus deep anæsthesia is prevented.

C. J. CAMPBELL, M. D., PARIS,

Has for years employed chloroform in labor with good results.

*The administration of chloroform in intermittent* doses, during the second stage of labor, is of undoubted value. Had it no other but a moral effect on the patient, even then it would be most valuable, inasmuch as it abolishes the dread of coming pain, and enables her to enter labor with confidence and tranquillity. But chloroform, without diminishing the force of the uterine contraction, relaxes the parturient canal, abolishes the sensation of the straining pains which during this period are most violent and agonizing, and economizes the mother's strength by sparing her the exhaustion consequent upon the extreme tension of the nervous system. With regard to post-partum hemorrhage, the danger is infinitesimal, if the chloroform be withdrawn at the conclusion of the second stage.

M. LUCAS CHAMPIONNIERE, PARIS,

Says (*Le Progrés Méd.*, 1880,) that he uses chloroform in almost every case, but not to complete anæsthesia. Its action varies, requiring a larger amount and longer time in some than in others. Early in labor a quite small quantity gives great relief, and yet the labor goes on rapidly. Later, it requires a

greatly increased dose, and the anæsthesia must be more profound, and must be maintained. When the waters are evacuated and the uterus firmly contracted on the child, the resistance is greatly increased, and more trouble is experienced in obtaining the good results. Here the chloroform may be pushed until sleep is induced. This author finds that it never retards labor, generally accelerates it, does not cause stupor in the child, and the woman has a better convalescence in every way. He has seen no contra-indications to its use in any case.

PROF. WM. T. LUSK, M. D., NEW YORK,

In a paper "On the Necessity of Caution in the Use of Chloroform During Labor," states the following propositions:

I. Deep anæsthesia, carried to the point of complete abolition of consciousness, in some cases weakens uterine action, and sometimes suspends it altogether.

II. Chloroform, even when given in the usual obstetrical fashion, namely, in small doses, during the pains only, and after the commencement of the second stage, may, in exceptional cases, so far weaken uterine action as to create the necessity for resorting to ergot or forceps.

III. Patients in labor do not enjoy any absolute immunity from the pernicious effects of chloroform.

IV. Chloroform should not be given in the third stage of labor. The relative safety of chloroform in parturition ceases with the birth of the child.

V. The more remote influence of large doses of chloroform during labor upon the puerperal state, is a subject that calls for further investigation and inquiry.

With these five propositions he is prepared to close his indictment against chloroform in midwifery. It is not a formidable one, and need not deter from its cautious employment. But the sense of possible danger which governed its use in the hands of those to whom we owe its introduction into practice, has been replaced by an overweening confidence.

PROF. R. BARTHOLOW, M. D., PHILADELPHIA,

Says when labor is of short duration, and not excessively painful, anæsthetics are not to be used. But when the labor is protracted and suffering great, they favor progress, and prevent exhaustion and uterine inertia. Caution is required with primipara. Inhalation should not begin till the close of the first stage, unless there are "nagging pains," and only during a pain. The effect must be watched, and the inhalation stopped if the pulse fails, the respiration becomes short, and the pains lose efficiency. Complete unconsciousness is not necessary.

In instrumental delivery, anæsthesia is important; it facilitates the operation, and prevents shock. It must be carried so far as to ensure quietude of the patient, but not complete muscular resolution. In *turning*, chloroform narcosis must be deep enough to suspend uterine contraction.

## RÉSUMÉ OF REMEDIES.

***Alcohol.*** In default of other anæsthetics, a full dose of whiskey or other spirits is a popular obtunder of pain. By some obstetricians a mixture is used containing alcohol, as that proposed by the Medico-Chirurgical Society of London.

| | | | |
|---|---|---|---|
| 309. ℞. | Alcoholis, | 1 part. | |
| | Chloroformi, | 2 " | |
| | Etheris sulph., | 3 " | M. |

***Chloral*** has been suggested, but its absorption is slow and its results uncertain. Injecting it into the veins, after the method of Dr. ORE, of Bordeaux, is said to be dangerous. PLAYFAIR prefers chloral to chloroform; he gives gr. xv. at a dose, and repeats in twenty minutes, if necessary. Dr. A. F. WATKINS (*Amer. Practitioner*, March, 1880,) has derived great advantage from fifteen to twenty grains chloral in cases of rigidity and spasm of the cervix. The dose may be repeated every twenty minutes as required.

*Chloroform.* SIMPSON recommends chloroform to be used in labor, by laying a single fold of a handkerchief over the nose and mouth, and dropping the anæsthetic upon it, a single drop at a time. In this way it becomes thoroughly mixed with air, and is entirely safe. Drs. J. RINGER, PLAYFAIR, and others, believe that chloroform weakens uterine contraction. According to a recent writer in *La Presse Médicale*, chloroform acts more vigorously and persistently upon the retractility than upon the contractility of the womb. To secure this action, prolonged inhalations, rather than complete anæsthesia, are desiderated. The contraction of the abdominal muscles is more diminished by the chloroform than uterine contraction is. But whilst both these effects of this anæsthetic are in proportion to the intensity of the anæsthesia, they disappear rapidly, indeed, almost instantaneously, on the cessation of the inhalation, whilst the diminution of uterine retractility continues longer. Dr. GEHRUNG, of St. Louis, thinks that the poisonous action of chloroform is intensified by ergot, both being cerebral anæmiants.

*Ether.* Pure, well-washed, sulphuric ether, is claimed by many to combine more in its favor as an anæsthetic in labor than any other agent. But, as Dr. R. P. HARRIS points out, (notes to PLAYFAIR'S *Midwifery*,) only in exceptional cases does it act satisfactorily. In many it induces intoxication and excitement, and diminishes or stops the expulsive efforts, and leads to uterine inertia and consequent post-partum hemorrhage. Its administration should be preceded by a small dose of brandy, to prevent gastric disturbance.

*Hypnotism* or *Mesmerism.* This artificial condition of anæsthesia has been induced to blunt the pains of labor, and, it is stated, with complete success. A case was recorded by Dr. W. B. FAHNESTOCK, in the *Boston Medical and Surgical Journal*, vol. XXXV., No. 10, 1846, in which a woman was delivered of a full-grown, healthy child, while in a state of "artificial somnambulism," without feeling a pain or interfering with the natural contractions of the uterus. In a work published later by the same writer, (*Artificial Somnambulism*, p. 316, 1869,) he states that in many other

cases he has used the same means with equally satisfactory results.

***Morphia.*** The hypodermic injection of morphia has been found to arrest uterine contraction, and is therefore not adapted to labor.

***Nitrous Oxide,*** a safe and agreeable anæsthetic, produces an influence of too short duration to be conveniently employed in obstetrics.

## ANTISEPTICS IN LABOR.

Enlightened obstetricians are now fully convinced that a puerperal woman is in the condition of a patient with a large open wound, and is subject to all the risks of poisoning from septic materials which attend such cases. It is doubtful if puerperal fever is anything else than one of the forms of septicæmia; hence it becomes the duty of the obstetrician to exercise the same precautions against putrid injection at child-birth which the surgeon employs in a capital operation. These measures, as recently laid down by FRITSCH, (translated by Dr. J. W. ELLIOT,) are as follows:

"As a prophylactic measure, at the beginning of labor, the patient should have a hip-bath, the hair should be cut from the genitals, the vagina and vulva should be washed with soap and disinfected with carbolic acid. All the linen, etc., should be perfectly clean. Next, the hands of the doctor and nurse should be absolutely clean. As many of the instruments as possible should be new, at least clean beyond a doubt. No one can be perfectly sure that some particles of dirt are not still lodged about the finger-nails or in the folds of the skin. I therefore propose for students or doctors who have been at work on putrid material, or if you like for ordinary use, that they use while examining a thin rubber or gold-beater's skin glove, which having a smooth surface can be made perfectly clean. During labor every examination should be preceded by a vaginal injection of three per cent. carbolic acid to prevent the examining finger from carrying germs lodged at the vulva, or in the vagina, up to the uterus, which is about to be more or less lacerated. Examinations should be made as seldom as possible, and manipulation with the os uteri or forcible attempts to reach a fontanelle are unpardonable. After a normal delivery the vagina should immediately be washed out with three per cent. carbolic acid, and these injections should be continued twice or three

times a day, according to the foulness of the lochia, for nine or ten days, in order to wash away the lochia which stagnate just behind the fourchette, if the patient is in the horizontal position.

"The spray has been and is somewhat used just as the head appears. After delivery the uterus and genitals should be considered as a deep and important wound, which may heal by first intention, or in which the secretions may stagnate, become putrid, and be absorbed. If the temperature rises to 103° F., and no trouble with the nipples or other abnormal condition be present, then it is to be supposed that the patient has been infected, and the whole generative tract to the fundus uteri should be washed out with five per cent. carbolic acid. An irrigator or fountain syringe will be found more convenient and much safer than any other kind of syringe.

"An English elastic catheter is convenient to pass into the uterus, and should always be held between two fingers spread apart, to secure a free outlet for the fluids injected. A new catheter should be used for each case.

"During the delivery of a macerated fœtus, and when meconium or stinking water has come away, carbolic vaginal injections should be repeated every half hour, and after delivery the whole genital tract should be washed out with five per cent. carbolic.

"When part of the membranes are retained and there is no hemorrhage, some authorities hold that they should immediately be removed to prevent the danger of infection, while others maintain that there is more danger of infection from introducing the hand or curette than from leaving the membranes and constantly washing out with carbolic acid.

"Even after the temperature has been high for some days and the abdomen is already tympanitic a thorough washing out of the uterus with a disinfectant is often followed by an unexpected change for the better. Although this treatment will not save a patient after septicæmia is fairly established, yet the results are often astonishingly good in cases apparently far advanced. It is certain that by the local treatment we can in many cases stop the

process, and in others its course is at least rendered milder. When the secretions are inclined to be retained a drainage tube may be left permanently in the uterus, and washed out every two hours, or oftener. In severe cases constant irrigation of the uterus is of value. To accomplish this the patient is placed on a rubber bed-pan, with a tube in the bottom to empty it; a double-current catheter or simply a drainage tube is passed to the fundus uteri, and held in place by packing the vagina with carbolic gauze. The fluid is in an irrigator, and the flow can be regulated according to circumstances. If the fluid be kept cold by ice we get the additional benefit of the cold to reduce temperature. The uterus lies so deep in the middle of the body that this is very efficacious."

It must, indeed, be said that perhaps the most important improvement in obstetrics has been effected by the introduction of antiseptic methods. It has been correctly observed that in both obstetrics and gynecology the conditions in which putrefactive changes are met with are found to exist in a great number of cases. The puerperal state presents a variety of conditions which lead to septic absorption if not corrected by the proper employment of antiseptics. After child-birth the uterus and vagina present lesions of continuity through which septic matter brought into contact with them may be readily absorbed. The interior of the uterus has been barred at the placental site, its vessels are open, and through this denuded surface septic matter may be readily introduced. Other sites of absorption are also to be found. How often do we meet with cases of lacerated cervix, abrasions or lacerations of the vagina, fourchette or perinæum, retained portions of placenta, or blood clots left to undergo absorption or decomposition? In all such conditions we find the strongest indications for the use of antiseptics.

As a general rule it may be laid down that all operations about the vagina should be preceded by cutting the hair, a hip-bath, a thorough washing of vagina and vulva with soap and carbolic. Closing a ruptured perinæum is often done under carbolic spray.

SCHROEDER and MARTIN, of Berlin, and others, do all the operations about the vagina under a constant stream of carbolized water. An irrigator being filled with a two per cent. solution of carbolic acid, one of the assistants directs the tube so that the wound is kept protected from the air; a rubber sheet under the patient is gathered at the bottom near the floor, and conducts the fluid to a receptacle.

Prof. STADFELDT, of Copenhagen, (*Centralblatt für Gynecologie*, No. 7, 1880,) maintains that not only the mortality but the morbility of the patients is diminished by the antiseptic precautions. The method adopted by him is methodical washing out of the vagina before delivery, the application of carbolic vapor spray during the delivery, and intra-uterine injections with carbolic lotion after delivery. He expresses his astonishment that the application of carbolic spray has found so little acceptance in lying-in institutions, stating that in the Copenhagen Maternity it has been four years in use for every labor, without having caused any injurious results to mother or child. He states, also, that its application causes so little trouble that he cannot see why a method so reasonable for a lying-in institution should be summarily pushed aside. The spray must be commenced from the moment when the parts of the child begin to show themselves at the vulva until any tears which may have occurred during the delivery in the vulva are united by suture, and the genital opening is covered with a layer of prepared jute. The intra-uterine washings after delivery have been found specially beneficial under certain conditions, although he has only used a three per cent. solution, but in large quantity. He has never observed any evil results from these injections in hundreds of cases.

In the Obstetric Hospital of Prague, the antiseptic method is rigidly observed under the directions of Prof. B. VON WEBER. Every physician, student and midwife is supplied with a two per cent. solution of carbolic acid, permanganate of potassa, soap, nail-brush and scissors, and before entering a ward must wash

the hands in soap and water, use the brush, and then the disinfecting fluid.

Near the end of pregnancy, if there be much leucorrhœal discharge, if it be fœtid, or if the patient be feverish, a two per cent. vaginal injection is cautiously given twice a day.

A woman taken in labor is put on a bed which has been carefully cleaned and purified. Her hands and nails are thoroughly cleaned, and they, as well as the genital organs and lower parts of the body, are washed with a two per cent. solution of carbolic acid. During the course of labor, after the membranes burst, a three per cent. solution is injected into the vagina every two hours, especially where the amniotic fluid is fœtid, where the child is known to be dead, where the membranes have burst and the head not yet engaged in the pelvic cavity, where the patient is feverish, where the presentation is abnormal, where the patient has come from the general hospital, or where the placenta is retained. When once the perinæum begins to be strained, two hand sprays are brought into use and continue to play till the placenta has been removed. For the first three days the vagina is washed out three times a day, and afterwards twice a day till the lochial discharge ceases. If it at any time becomes putrid, a three per cent. solution is used every three hours. In all cases where instrumental or more than ordinary manual interference is necessary, the steam spray is used. The lochial discharge is received on napkins, which are rendered antiseptic before being applied, or on carbolized cotton-wool, which is afterwards burned. Further, three per cent. intra-uterine injections are given where there has been any special manual or instrumental interference, where the labor has been protracted, where the fœtus has been dead, where gas or putrid amniotic fluid has passed from the uterus, where the temperature has risen, and where delivery has taken place on the street.

In the following classes of cases, intra-uterine injections of three to five per cent. carbolic water, or one to three chlorine water are used, viz., when the temperature is raised and where there is a suspicion of infection, where shivering takes place, and where

the lochial discharge becomes fœtid. The conditions which are held to contra-indicate intra-uterine injections are spasmodic contraction of the cervix uteri, or in the later days of the puerperium, complete involution of the vaginal portion, para or perimetritis, deep lesions of the cervix, or rupture of the uterus.

It is, of course, difficult to carry out in private practice the full details of the antiseptic method as practiced in hospitals. But a modified and valuable form of it is not difficult of application. One such is recommended by Dr. WILLIAM L. REID, physician, accoucheur to the Western Infirmary, Glasgow. (*Glasgow Medical Journal*, June 1881.) It is as follows:

Let every labor-expectant provide herself with a two-ounce bottle of 1 to 20 carbolic oil and same quantity of carbolic glycerine. When labor sets in and a vaginal examination is to be made, let the practitioner oil his whole hand, after having washed it thoroughly and passed it through a 1 to 30 watery solution made by reducing the carbolic glycerine. Let the carbolized oil be used in this way every time an examination is made. This would serve two good purposes—less vaginal mucus would be removed by the finger, and a film of carbolized oil would be left to prevent septic mischief in the canal. After the labor is over, the external genitals are to be bathed by the nurse with a warm 1 to 20 solution, and a napkin applied, on the face of which is laid a piece of lint damped with the oil. This bathing and dressing to be kept up for at least a week. These precautions would do away greatly with the risk of infection, and yet would not involve unreasonable trouble on the part of the attendants.

In the case of a woman delivered of a dead child, where the placenta and discharges are foul, it is desirable to wash out the vagina twice a day with a pint of warm carbolized water, using a syringe with a metal or vulcanite vaginal point, which possesses only lateral exit holes. This would prevent decaying material from adhering, if the point be not too old, properly washed and kept in a carbolic solution. None of the fluid could be

forcibly and dangerously injected into the uterus even with only very moderate care in the use of the instrument.

In simple forceps cases, if no previous vaginal examination has been made with the unprotected fingers, it is unnecessary to wash out the vagina, either before or after the operation, but simply to freely carbolize the hands, instruments, and napkins used. It is not advisable to wash out the vagina before the operation, because it deprives it of its natural and valuable lubricating mucus, and because, presumably, no air has had access to it; nor afterwards, because the strongly carbolized oil will serve the purpose for some hours. But, on the other hand, if there has already been much vaginal manipulation, it is desirable to begin by washing it out with carbolic water, and then lubricating it freely with the oil. After every case of operative interference, the vagina should be washed out twice daily for a week, and carbolized lint, gauze, a sanitary towel, or some such dressing applied to the vulva.

Where either bipolar or ordinary podalic version is practiced, or where there is any such often repeated manipulation as is involved in the removal of the cranial bones, and in embryulcia, the spray should be used as well as the oil, else the frequent introduction of a little air would be pretty certain to lead to decomposition of the uterine fluids.

No vaginal examination should be made without the use of an antiseptic ointment. The following is recommended by Dr. REID:

ANTISEPTIC LUBRICATING OINTMENT.

| | | | |
|---|---|---|---|
| 310. ℞. | Pure soft soap, | ℥ iij. | |
| | Glycerine, | ℥ j. | |
| | Carbolic acid, crystals, | grs. xxx. | |
| | Oil of bergamot, | q. s. | M. |

Apply after thoroughly cleansing the hands or instruments.

Mr. ARTHUR RICHARDSON, writing to the *Lancet*, October 30th, 1880, prefers the following lubricator:

311. ℞. Castor oil, ℥ vij.
Carbolic acid, ʒ j. M.

Use as above.

PROF. ZWEIFEL, ERLANGEN.

In the *Berliner Klin. Wochenschrift*, No. 1, 1878, he alludes to the plans of several authorities: BISCHOFF, of Basle, gave a bath at the outset of labor, washing out the vagina with a two per cent. carbolized lotion, anointing the fingers of the attendant with a ten per cent. lotion at every examination, previously disinfecting the hands by washing in carbolized water. When the hand must be passed within the uterus, or if the fœtus was well decomposed, the cavity was irrigated well with the lotion, and the injections were continued for thirteen days after delivery. After labor, any wound was touched with a ten per cent. lotion. A pad of wadding, soaked in carbolized oil, one part to ten, was placed at the opening of the vagina, and frequently renewed.

H. FEHLING, at Leipsic, applied salicylic acid and starch, one part to five, to all wounds, and syringed the vagina several times a day, in case of fœtid discharge, with a salicylic lotion.

SCHUCKLING employed at the close of labor a carbolized lotion of five per cent., to irrigate the parts.

ZWEIFEL's own method is partly the use of antiseptic measures, and partly adoption of the most scrupulous cleanliness in connection with the surroundings of the puerperal woman. All vaginal examinations *during pregnancy* are made only after careful washing of the hands and smearing with carbolic oil, the vagina being further washed out afterwards in some cases with five per cent. carbolic solution. The reason for these precautions is the possibility of infectious matter being introduced into the vagina previous to labor, of its lying there and being sucked up into the uterus after the expulsion of the fœtus.

The rooms and beds destined for the use of the lying-in, are carefully disinfected by burning sulphur in them in fire-proof vessels, allowing about four grammes of sulphur to each cubic metre of space. The bedclothes are spread out so as to expose

as large a surface as possible to the fumes, which, after a few hours, are allowed to escape by opening the windows.

After each labor in which the hand has been introduced into the uterus, or where air has gained entrance to it, or gaseous decomposition occurred in it, the uterus is washed out with several litres of fresh water.

Since almost all the cases of puerperal fever are found to be complicated either with ruptured perinæum, small rents in the vagina and vulva, or with the introduction of air into the uterus during some operation, the greatest care is bestowed on all external wounds, to which FEHLING'S mixture of salicylic acid and starch is applied with the best results. Careful examination of the external genitals day by day, and the use of the thermometer, are also rigorously attended to.

*Tar-water* is maintained by Dr. JOSEPH EVE ALLEN, of Augusta, Georgia, (*Atlanta. Med. and Surg. Jouanal*, Oct., 1880,) to be a more valuable antiseptic in midwifery than any other known to us. He claims that the advantages which tar-water has over carbolic acid, chloride soda, thymol and other antiseptics, and which fit it especially for use during confinement, are: 1st. It is a perfect antiseptic and disinfectant, while its odor is pleasant and agreeable, and such as not to offend the most fastidious. 2d. The oily and resinous principles which it contains exert a healing action upon the genital lesions, and suppuration is prevented. 3d. The ease with which tar-water can be obtained, and its great cheapness, places it within the reach of the poorest people. Tar-water is to be used as a vaginal wash three times daily, during the lying-in period, and the cloths used to protect the vulva and receive the discharges should be moistened with it. It may also be employed, should occasion demand, as a wash for the uterine cavity.

### ANTISEPTIC UTERINE POST-PARTUM INJECTIONS.

As is mentioned above, these injections are recommended by some after delivery, in every case; by others, only when there is

especial cause to fear septic contamination. SCHROEDER, of Berlin, has used strong a solution as of carbolic acid, as 5 per cent. But later observers are convinced that this is attended with risk.

Dr. HOFMEIR, of Berlin, thus speaks on this subject: "It has of late been advised, in the prophylaxis of puerperal fever, to irrigate the vagina, cervix, and uterus in all cases, with a two per cent. solution of carbolic acid. I wish to show the not inconsiderable danger of this method, resulting, in my opinion, from the necessity of bringing hand and instruments in direct contact with large raw surfaces; besides, we have not the conditions so completely under control that we can guarantee the absolute cleanliness of instruments, &c. Of two hundred and sixty normal cases of recently-delivered women whose uterus I injected, forty-two became ill with inflammatory affections of the genital tract, or 16 per cent. Of two hundred and forty-nine not so treated, nineteen became ill, or 8 per cent. Of the first series, eight were dangerously ill; of the latter, only one. These statistics are serious. The circumstances are, however, considerably altered when, during the birth, gangrene, decomposition, and formation of gas in the uterus, and, subsequently, fever develop themselves; when we consider how fatal is this condition under an expectant treatment, according to Standes' statistics—deaths, 50 per cent.; illness, 57 per cent.; undisturbed recovery, 43 per cent. We must seek to remove decomposing masses, or at least, to make them innocuous, and for this purpose a five per cent. solution is required."

The dangers likely to accrue from such injections are—1. Severe pains and convulsions from the shock of the uterine injection being present, even where the antiseptic used was only one per cent. in strength, so that it could not be the cause of the alarming condition. 2. Over-distention of the uterus may also occur, and this leads to severe pain, and may induce inflammation. Another danger (3) is the possibility of infecting a

patient with a syringe not thoroughly cleansed, and, to obviate this, an ordinary double catheter of vulcanite is recommended.

In a recent discussion Dr. ATTHILL pointed out the great value of these injections, and expressed his opinion that a one per cent. solution of carbolic acid used twenty-four hours after delivery is quite safe.

# PLACENTA PRÆVIA.

DR. ISAAC E. TAYLOR, NEW YORK.

This author (*Trans. of the Amer. Gynecol. Soc.*, 1878,) remarks that the methods which have been adopted in the management of placenta prævia are:

1. The tampon.
2. Version, internal or external, or both.
3. Partial circular detachment of the placenta. (BARNES.)
4. Complete detachment. (SIMPSON.)
5. Lateral detachment—usually adopted.
6. The forceps.
7. Induction of premature labor.

As a tampon our author prefers the ordinary surgical bandage. After the external parts have been lubricated, the bandage is introduced into the vagina and packed firmly and securely, one end being allowed to hang from the vulva, so that by one pull the whole tampon may be removed.

The tampon not only arrests hemorrhage, but stimulates uterine action and paves the way for version or the forceps. *Ergot* may be given carefully, and according to the nature of the case, to increase the uterine action after the tampon has been inserted. After from one to three hours the tampon may be removed, and, as a rule, the patient can be at once delivered.

The advantages of early version are considerable, and the fears about it which have been expressed by some writers are groundless. In the majority of cases the use of the forceps is not necessary. The induction of premature labor is called for in a small number of cases.

DR. ENOCH W. KING, OF NEW ALBANY, IND.,

Has published the analysis of a large number of case of placenta prævia, treated by various means. (*Amer. Jour. of Obstetrics*, Oct., 1880.)

In regard to *ergot*, there appears to be little doubt that it exercises a favorable influence if administered in suitable cases, and at the right time. This means that we should be guided in its administration by the same rules as in ordinary labor; that is, until there is a demand and an opportunity for expulsive, not dilating pains. It is especially dangerous to the child when there is a complete presentation of the placenta, thus forming an obstruction to the delivery.

*Completely detaching the placenta* usually controls the hemorrhage, but is almost invariably fatal to the child. *Evacuation of the liquor amnii* cannot be recommended, on account of the danger resulting from occult hemorrhage. The *tampon* is of doubtful efficiency, and very certainly increases the risk in many cases to both mother and child from intra-uterine hemorrhage. The use of the *forceps* as a means for hastening delivery has been found wanting. The most satisfactory results have been from *version*, performed as early as possible, together with the administration of ergot at the appropriate moment, to secure efficient uterine contractions after the contents of the womb have been expelled.

DR. JOHN HAUENSTEIN, BUFFALO

Concludes the treatment of a case as follows (*Buff. Med. and Surg. Jour.*, Oct., 1875): The vagina, a yielding cylinder, cannot be plugged with an unyielding tampon; hence he uses a colpeurynter with a moderately thick layer of absorbent cotton drawn over it, and large enough to cover it when distended with water. To prevent post-partum hemorrhage, he applies a plug saturated with subsulphate of iron, at the same time keeping up the contraction of the uterus.

DR. J. R. NUNN, SAVANNAH, GA.,

Reports a successful case treated by *persulphate of iron*, in the *American Journal of Obstetrics*, 1879. He uses it as follows: He found the pains had entirely ceased, the vagina was filled with clots, the os dilated sufficiently to admit the finger, by which the placenta could be easily detected, and the warm blood could be distinctly felt flowing through the os. Cleaning out the clots, a speculum was introduced, and the *liquor ferri persulphatis* was applied to the bleeding surface by means of a cotton swab passed through the os. The hemorrhage ceased instantly and absolutely, and the speculum was retained in place about fifteen minutes, to see that bleeding did not recur. Stimulants and ergot were then given freely, and a pledget of cotton saturated with styptic was left in the os, and sustained in place by a very slight tampon of cotton merely sufficient to hold it in place until contractions and the os was sufficiently often to admit of version.

M. CHANTREUIL, (*Union Med.*, July 15th, 1879,) in anæmia after hemorrhage from vicious insertion of placenta, uses injections of sulphuric ether (4 grammes) into the subcutaneous cellular tissue. Later, one or more such injections of brandy. The heat is re-established, and the patient is re-animated.

# TEDIOUS LABOR.

## RIGID OS AND ATONY OF UTERUS.

ALBERT H. SMITH, M. D., PHILADELPHIA,

In a paper read before the Philadelphia County Medical Society, (*Medical and Surgical Reporter*, August 11th and 18th, 1877,) says the causes of delay may be divided into classes: Rigidity of the os or absence of the dilatory force, or real and apparent rigidity. Spasmodic contraction of the os is a neurosis, and for its relief we require such means as quiet nervous excitement, allay sensibility, diminish the activity of the circulation, and control the local congestions. First of these is *opium*. Acts promptly, without danger, and never contra-indicated. A suppository of one-half a grain to a grain of watery extract, or its equivalent in morphia, powdered opium, or an enema of laudanum, or the hypodermic; or in case of much fever, morphia with digitalis and diaphoretics, will be certain of good results.

Ether or chloroform may give the same, but are not so safe, and diminish the force of the contractions, and may cause inertia uteri and hemorrhage.

Passive rigidity, that is, a want of distensibility, must be met by the douche of hot water, 105° to 110°, injecting a quart at a time by the syringe against the os and cervix, and repeating every hour or two. Traction by the finger upon the anterior lip is here of great value, though not when there is spasm. When the membranes are not ruptured, care should be taken not to do this. The India-rubber bags are valuable dilators—that of BRAUN, of Vienna, or better, the fiddle-shaped bags of BARNES; they should be filled with warm water until fully expanded. After dilatation has given room, apply the forceps within the lips, and thus we gain an additional dilating power. There can be no more risk to the tissues than by the passage of the head without

them. During each contraction the forceps may be gently drawn upon.

Incision is justifiable only under extremely rare conditions.

In delay from absence of the dilating wedge, which is the most common cause of delay, this is often the result of inertia, and may be met by abdominal frictions, diffusible stimulants, ginger, balm, mint, or other hot teas, hot and cold douche, etc. The best of all is the *bisulphate of quinia*—say 15 grains in one dose.

When the preternatural distention of the amniotic sac stretches too greatly the uterine fibres, its rupture will generally speedily correct the evil. Irregular contractions are best met by the quiet and rest of opium, anæsthetics, chloral, etc.

Premature labor would also cause delay, and require opium or chloral for relief.

In cases of disproportion of the head and pelvis, the one abnormally large, or the other small, the only remedy is to carry the forceps within the os, and the accomplishment of the delivery as above detailed.

W. H. LONG, M. D., LOUISVILLE, KY.,

Speaks of *viscum album* or *mistletoe* as an oxytocic. He has used it for ten years. It acts with more certainty and promptness than ergot, and does not cause continuous or chronic contractions. The fluid extract is preferable, in doses of a drachm, repeated every twenty minutes until the desired effect is induced. The infusion is made by taking 2 oz. of the dried, or 4 oz. of the green leaves, pouring over them one pint of boiling water, covering until cool enough to drink. Dose, two to four ounces, repeated in twenty minutes, if necessary. He has seen excellent results follow its use in post-partum hemorrhage and in menorrhagia.

J. H. BENNETT, M. D., OF OHIO,

Proposes (*Detroit Lancet*) to facilitate and shorten labor by giving a hypodermic injection of morphia, gr. ¼. When rest has restored the

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...ve management, if the patient is weak and the
...nduce instinctive action of the uterus and abdom-
... pass the middle and index-fingers of the right hand
...r surface down) back with gentle pressure downwards
... the perinæum and vulva, producing the sensation of ad-
...ance of the head.

HENRY L. HORTON, M. D., NEW YORK,

(*Am. Jour. Obst.*, July, 1878,) states that *atropine* injected into the tissues of the cervix uteri will lessen the pain and shorten the duration of the first stage of labor, by overcoming the spastic rigidity of that structure. He uses about one-fortieth or fiftieth part of a grain of atropia sulphate for each injection. He has had manufactured a hypodermic syringe, long needle with a hook-curve at the end. "After hooking the anterior lip of the cervix with the index-finger of the right hand and drawing it slightly forward, he carries the needle along the palmar surface, keeping the point pressed quite firmly against it, so as to avoid wounding the maternal parts. After carrying its points well within the cervix, he raises it from the finger, and by a slight traction, buries it somewhat deeply into the muscular structure of that portion of the uterus. After discharging its contents, he retains it in that position a few moments, in order that the absorption of the atropine may be certain to take place."

PROF. W. S. PLAYFAIR, M. D., LONDON.

Where there is feeble or irregular action, a loaded rectum is often the cause, and a large enema will generally produce a remarkable effect.

Excessive distention of the uterus is relieved by rupture of the membranes. Adherent membranes may be separated by sweeping the finger or a flexible catheter round within the os. Uterine deviations must be corrected by placing the patient on the opposite side to that towards which the organ points, or when anterior, place her on her back and apply a bandage to prevent the organ falling forward. Temporary exhaustion requires rest, as by an opiate, as 20 minims of Battley's solution or an enema of the same. When pains are irregular, spasmodic and painful, chloral is of great value.

Oxytocics or remedies to increase the force of the pains, are borax, cinnamon, quinine, galvanism, and ergot. The latter has

serious disadvantages to both mother and child. It is only allowable when the os is fully dilated.

Manual pressure often produces the most speedy effect. The best way is to place the patient on her back at the edge of the bed, and spread the palms of the hands on each side of the fundus and body of the uterus, and when a pain begins, make firm pressure down and back in the direction of the outlet; relax the pressure when the pain goes off, and resume when a new pain comes. The patient need not lie on her back; pressure may be made in the ordinary obstetric position on the left side, the left hand spread over the fundus, leaving the right free to note the progress per vaginam. This plan is completely at the will of the operator, and can be nicely regulated; it imitates nature, and is without risk to child or mother. The pressure must be firm, but not rough. The use of the *forceps* is now becoming the rule in place of the exception, to put an end to protracted labor. It diminishes in a marked degree infant mortality. There is no danger to the mother, but often great danger from a delay in their use.

PROF. WM. LEISHMAN, M. D., GLASGOW.

In rigid os, anæsthetics are required. Chloroform is preferred, but chloral is more marked in its effects. When the os seems occluded, mechanical means to dilate must be employed, as sponge-tents, and the like. Inertia of the uterus may be caused by rheumatism, neuralgia, etc. A distended bladder or rectum may act mechanically, and in such cases there is generally cramp of the lower limbs, and this agony weakens the action of the womb. The means of relief here is patent and immediately efficient.

Ergot, to increase the activity of the pains, is never perfectly safe, and the forceps should, when possible, be preferred.

ALFRED MEADOWS, M. D., LONDON.

Tartar emetic will be found of the greatest service in small

and frequently-repeated doses, so as to cause nausea, when the rigidity readily yields. Sometimes it appears to act better when combined with opium, or is facilitated by saline purgatives, as where there is gastric derangement, with foul tongue, offensive breath, constipation, etc.

Opium alone is of the utmost value. Chloroform is another valuable remedy. Bleeding, in plethoric subjects, requires a full stream, to the amount of twelve or sixteen ounces. A vaginal pessary—one part gelatin, four of glycerine, made with two or more grains of extract of belladonna—soon melts and is absorbed, and may aid the dilatation. In certain cases all these fail, and we require the artificial dilator, the India-rubber bag. Where rigidity is obstinate, and there is fear of uterine rupture, or exhaustion of the patient, the cervix should be incised, not too deeply, say from a quarter to half an inch in several directions.

ARTHUR WIGGLESWORTH, M. D., LIVERPOOL.

This writer (*Obstetric Journal Great Britain and Ireland*, Sept., 1877,) advances these propositions: An os more or less dilated, but rigid with active contractions, is rigidity from spasm; this may arise from direct or indirect causes, but with the same results; this condition may be removed by the administration of *morphia*, with the object of relaxing the circular fibres without inducing either nausea or exhaustion. The dose must be regulated according to physical condition of the patient, the amount of rigidity, the condition of the stomach. A nervous, excitable temperament requires a smaller dose than a phlegmatic one, also if there is much exhaustion. A thick, rigid os, with a phlegmatic system, requires a larger dose, or a repetition. If the stomach is loaded, a larger dose is required.

Where rigidity has been long existent, and there is exhaustion without relaxation, and a subsidence of uterine action, ergot and morphia should be combined.

WM. STEPHENSON, M. D., LONDON,

In the *Obstetric Journal Great Britain and Ireland*, Aug., 1878, directs the introduction of one or more fingers of the right hand within the os, opposite the thyroid foramina in first and second positions, and the sacro-iliac junction in the third and fourth, and thus to lift or support the head during each pain. His design is to effect the extrusion of the occiput through the os, securing greater flexion and aiding rotation. It is employed after rupture of the membranes, before complete dilation, and when the cervix does not yield and recede over the head.

## RÉSUMÉ OF REMEDIES.

*Alcohol* counteracts the tendency of anæsthetics to weaken uterine action, and acts as a general stimulant to the muscular forces in labor. (Dr. D. MORTON, *Amer. Practitioner*, Dec., 1874.)

*Antimonii et Potassæ Tartras*, in tedious labor from rigid os, in doses of gr. $^1/_{20}$ to $^1/_{12}$ every fifteen minutes, is an ancient and often efficient method of overcoming spasmodic muscular contraction.

*Amyl Nitrite.* When the uterus is spasmodically contracted on the fœtus, Dr. MAURY, of New York, believes that this agent is a most valuable remedy.

*Atropia* is given by Dr. HORTON, as above stated, in cases where the uterus has become completely or partially spasmodically contracted on the fœtus, or on a separated placenta, in order to overcome the spasm. Dr. FRANKEL, of Breslau, recommends a hypodermic of $^1/_{33}$ of a grain of atropia, and ¼ of a grain of morphia, with inhalation of chloroform five minutes later. The uterus relaxes speedily and yieldingly. There need be no fear of post-partum hemorrhage.

*Belladonna*, in the form of ointment of the extract, is an agent of old renown.

*Carbonis Sulphidum.* MILNE EDWARDS and VAVASEAU assert that a few drops sprinkled on the abdomen of a woman in labor, will reawaken uterine contraction.

*Caulophyllum Thalictroides.* At a meeting of the Obstetric Section of the New York Academy of Medicine, Dr. SELL related a case as an example of several, in which he used the concentrated tincture of caulophyllum, blue cohosh or squaw-weed, with the happiest results, as a remedy to ward off tedious labor. The remedy was especially applicable in those cases in which the woman had habitually suffered severely during the first stage of labor. As a preparatory remedy in such cases, it should be administered in twenty-drop doses three times a day, for three or four weeks previous to confinement.

*Cannabis Indica.* Dr. ALEX. CHRISTISON claims that *cannabis indica* equals ergot, being quicker and more energetic, but of shorter duration.

*Chloral* acts at times indirectly as an accelerator of parturition. Dr. WM. L. RICHARDSON remarks (*Trans. Am. Gyn. Soc.*, vol. I.,) that it seems especially adapted to that large class of cases in which the pains occur at very short intervals, last but a moment, and are very severe. Little progress is made, and the patient suffers intensely, and becomes restless and nervous. In such cases the administration of chloral is followed by the happiest results. The dose may be gr. x.–xx., repeated if called for. Dr. T. A. REAMY, of Cincinnati, says that close observation has convinced him that no bad effects on the child follow the administration of this drug. (*Obstetric Gazette*, November, 1878.)

*Chloroform*, administered for its anæsthetic properties, will often do away with spasmodic rigidity of the os.

*Cimicifuga Racemosa* is alleged by the eclectics to exert some ecbolic powers. *Cimicifugin* is extolled as of great value as a substitute for ergot, acting speedily and energetically. The contractions, unlike ergot, are not powerful and continuous, and hence there is less danger to the child. After labor, it allays nervous excitement and relieves the after-pains, and checks hemorrhage. (PHILLIPS.)

*Cinnamomum* has some slight power as a uterine stimulant.

*Ergota.* The accelerator of uterine contraction is *par excellence* the ergot of the cereals; that of rye is usually employed. The propriety and rules of its use have been much and variously debated. Points generally agreed upon are

that it should not be given if there is rigidity of the os, nor until the os is dilated or dilatable. The contractions it causes are continuous and violent; hence it is suited to the third stage only.

*Gelsemium* is a valuable remedy in cases of rigid os during labor, gtt. v. of the fluid extract every ten minutes until there is nausea.

*Ipecacuanha* In cases of irregular uterine action, and protracted, agonizing, yet insufficient pains, this drug exercises the happiest powers, relieving the pain and hastening the termination of the labor. The dose may be gr. ij. every fifteen minutes. It takes effect in about thirty minutes. A very favorite form with some practitioners is "Dover's powder" in repeated small doses, combined either with ergot or chloral, as occasion demands.

*Lobelia Inflata* is asserted by SCUDDER and other eclectics to be a specific in rigid os. It probably acts from its nauseating properties. They prescribe:

312. ℞. Tinct. lobeliæ, f. ʒ j.
Aquæ, f. ℥ iv. M.

A teaspoonful every fifteen minutes.

*Oleum Ricini* in small doses, for some time before labor commences, is said to facilitate it.

*Opium* and its alkaloids are of advantage to control the nervous restlessness and exhaustion which supervene in tedious labor, and to lessen the spastic rigidity of the os. Small quantities, gr. ¼, of morphia, in camphor-water, may be given hourly or half-hourly. Of its employment during labor Dr. LUSK says that from a number of observations, there is no reason to apprehend any *direct* effect on the child from morphia hypodermically administered to the mother during labor. The propriety of its use, therefore, is to be determined by purely obstetric considerations. When given to meet some urgent need in the mother, it probably conduces indirectly to the welfare of the child.

*Quinia.* That sulphate of quinine has a direct power to promote normal labor, cannot longer be disputed. Dr. ALBERT H. SMITH, after a careful study of the subject, said some years ago (*Obstet. Jour.*, June, 1875,) that it

"increases the activity of the normal uterine contractions; the pains becoming more frequent and more intense, the expulsive power being greater, while the yielding of the circular fibres of the os is more prompt; the contractions maintaining their proper intermittent character, the relaxation and rest in the interval being complete; showing in this respect an entirely different action from the continuous spasmodic contraction caused by ergot. * * * It promotes permanent tonic contraction of the uterus after the expulsion of the placenta. * * * It diminishes the lochial discharge to a normal standard. * * * Its use is followed by less after-pains than usual, in a majority of cases. * * * Given during parturition, it never disturbs the brain or causes its usual unpleasant effects, even in patients who at other times are very susceptible to its influence." The dose is gr. xv., repeated if necessary. Others give gr. viij.–x.

*Sodii Boras* has a doubtful claim to being an oxytocic.

*Ustilago Maidis*, the ergot of maize, has been recently introduced. It is not dissimilar from other ergots.

*Viscum Album*, the mistletoe, has alleged paturifacient properties. (See above.)

## EXTERNAL MEASURES.

***Abdominal Friction*** is an excellent agent for expediting labor. Much force should not be used. The object is by gentle friction and pressure to excite uniform and effective uterine contractions.

***Dilatation*** of the os by the finger has been strongly recommended by Dr. JAMES BRAITHWAITE, where the rigid os gives rise to symptoms of exhaustion. In the method he employs, the right index-finger is introduced within the os uteri, with its palmar surface toward the sacrum; the left index-finger is then passed, with its palmar surface toward the pubes, the left hand crossing over the right for this purpose. By gentle pressure in opposite directions the os is readily made to dilate; the fingers being hooked within the os, the pressure is also made downward, thus very closely resembling the natural process. As soon as the os is dilated to the size

hand can be

ant, but it has
sily manageable,

be resorted to in
rigidity.

perly-chosen cases,
causing any increase
only instrument re-
water, is a syringe
this apparatus can be
a yard of India-rubber
h in diameter, joined to
carry off the water direct
pace, thus avoiding wet-
should be as warm as the
r, and in practice it is ad-
water raised to the full tem-
add boiling water until the
F. has been attained. The
ntinued from five to twenty
umstances.

an comfortably bear, will often
lieve the patient in the most

spasmodic contractions, is hardly
that the means above enumerated
ch.

# AFTER-PAINS.

DR. JOHN E. RANKING.

This writer, in a very thorough analysis of the symptoms and treatment of after-pains (*Edinburgh Medical Journal*, July–Sept., 1880.) distinguishes between those which are of an expulsive, spasmodic, rheumatic or neuralgic origin. The preventive and curative treatment of these differ materially.

1. *Expulsive After-pains.* These are usually owing to post-partum coagula. Their prevention aims to ensure firm contraction which shall last long enough to allow durable thrombi to form in the mouths of the uterine vessels, and furthermore so to regulate the patient's surroundings that the fall of vascular tension which almost invariably succeeds delivery shall not be too rapidly disturbed. The object, then, is two-fold—(1) Efficient contraction; (2) Vascular tranquillity.

Nature's mode of ensuring efficient contraction is, by affording a due proportion of rest to the uterine fibre. This may be imitated, by avoiding all hurry in the management of the later stages of labor, especially the third. The placenta must not be hurriedly expressed nor withdrawn; but we must wait until a renewed and vigorous throe shows that the organ is ready to resume contraction. The hand, after expressing the placenta, should continue to grasp the uterus firmly, yet gently, for some time; and the binder should not be applied until we are satisfied that the organ has no tendency to relax.

In some other cases (and these occur most commonly among the poorer classes,) in which, either from the history of previous labors or from any other circumstance, we have reason to suspect great want of uterine tone, or when on former occasions we have found manual compression insufficient, we have a most powerful ally in *ergot*.

In most authors there is a want of distinction as to the exact conditions to which it is applicable and the period at which it is

... of persons who
... to give them ergot
... and why? Simply
... lic, and due not to
... uterine hyperæsthesia.
... relaxation of uterine
... and then only as a pre-
... tion of *liquor strychniæ*

... next claims notice. It is a
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... be put upon the maternal
... on the fœtus, and persistent
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... pulsion of the fœtus is not so
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... of vascular tranquillity is a *sine*
... where the vascular tension has not
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... which thus becomes necessary cannot be
... sing arterial tension considerably, and at any
... ty to nullify the firmest uterine contraction.
... of failure is administration of alcoholic stimu-
... on after delivery. To ensure the necessary
... quility, we must—(1.) Never allow the patient to
... herself, nor move her except by gentle and efficient lifting.

(2.) Never, except under absolute necessity, give alcoholic stimulants during or immediately after labor. The rule, which is so often urged in writing about post-partum hemorrhage, never to be too hasty in attempts to rally the patient from the faintness which is but assisting nature, applies here with equal force. (3.) Avoid all occasions of excitement and emotion.

In cases where it is possible to adopt measures for the improvement of nutrition and tone, both of the uterus and the general system, either in the intervals between successive impregnations or during the pregnancy, these should undoubtedly be employed. If, however, coagula have formed, our object must, of course, be to favor expulsion, and the sooner the better. For this purpose the best method, if it can be practiced, is *digital extraction.* If this be impossible, we are driven to the use of anodynes, not only to soothe the pain until the process is accomplished, but to assist in relaxing the cervical fibres. *Chloral* in one full dose, or, better, in smaller doses at frequent intervals, is often effectual; 15 or 20 grains, repeated at intervals of about twenty minutes for three times, is a suitable dose. *Opium* has been used from time immemorial; but the dose required is often enormous. *Nitrite of amyl* would perhaps prove useful, as Dr. Barnes has found it instantaneously beneficial in relaxing tetanus of the uterus. It must, however, be borne in mind that its use soon after delivery has been followed by flooding. *Chloroform* has no advantages over chloral. With either of these ergot may be given; but as the distress is due not to insufficient action, but to increased resistance, it will be rarely necessary. The same remark applies to friction over the uterus. *Purgation*, especially if brisk, is very useful in aiding expulsion of coagula; and of all purgatives, castor-oil, with or without opium, is the best, if its use be not contra-indicated by the presence of piles. The compound scammony pill is also a very elegant and most effective purge.

2. *Spasmodic After-pains.*—The condition of the uterine fibre upon which these depend appears to be so entirely an expression of a general constitutional habit that prevention, in the

sense of obviation of the primary cause, is entirely out of the question. So closely are they bound up with neuralgic after-pains that we may very well consider their treatment together. We must, however, make this limitation, that whereas no antecedent treatment will obviate nor apparently mitigate, in any great degree, spasmodic pains, proper and well-directed treatment during pregnancy is most effectual in preventing neuralgic pain in the uterus after delivery.

Spasmodic affections of the uterus, as of other organs, though often occurring without any apparent cause, are very much increased by any condition either local or remote, which excites or tends to heighten reflex irritability. Thus the increased local excitement consequent upon chronic metritis, irritable uterus, hyperæsthesia during pregnancy, hypogastric pains during pregnancy, a clot in the vagina which impinges upon without invading the cervix, may in each case give rise to very great pain. Again, retention of urine, or fæces or flatus in the intestines, and especially tender or sore nipples, will excite the same trouble.

*Preventive treatment*, therefore, consists in taking care that all possible causes of irritation, both local and distant, be as far as may be removed. Foremost of all stands the precaution that the uterus contract efficiently *ab initio;* for, in persons disposed to these pains they are doubly troublesome if the cavity has been distended. The best modes of ensuring this are manual compression, and especially by never allowing the uterus to spend its own and the patient's strength in fruitless, unavailing efforts. This is to be prevented by judicious use of sedatives in the early stages, and by instrumental aid during the later stages of labor. The care which is directed to a long and thorough preparation of the nipples for the office which they must fulfill will be well repaid, and careful regulation of the bowels will also be of service. A suitable dietary is another very efficient means of lessening suffering from these pains. The fact that they are known to be habitual should always prompt us to order a very liberal diet from the first. Thus many a patient who, upon a light and only moderately nutritious diet, is in sleepless agony for four or

five days will, if given a chop and a proper amount of her usual stimulant within twenty-four hours after delivery, be free of pain altogether by the third day. Sleeplessness is not only potent to perpetuate these pains, but will sometimes encourage their onset. One or two bad nights, especially if combined with the regulation starvation (which is still far too common) or with sore nipples, will often bring on these pains three or four days after delivery, even when they have, up to that time, been absent. By means such as these we may hope, if not entirely to avert, at least to diminish the suffering which the patient must undergo.

*Curative Treatment.*—Premising that, whatever means we may adopt for cure, the preventive measures just indicated must in all cases form part of the treatment, we pass on to consider the various drugs which are more or less useful in different instances. Here we are met by the real difficulty of the problem, to which we owe such frequent failures. The spasmodic contractions are caused directly, at any rate in the greater number, by the ganglia which reside within the uterine walls themselves; and until we know of some drug which will control the activity of these, without also affecting the whole organism, the medicinal aspect of the question must be unsatisfactory. The various drugs which are most suitable are, chloral, bromides, morphia, atropia, henbane, camphor, cannabis indica, conia, gelseminum, quinine. These may be employed both internally or as external applications. It is hard to say which is most generally useful, one often succeeding where another has failed; but in estimating the value of any one of them it is needful to remember that, except in very severe cases, the pain usually disappears naturally about the fourth or fifth day. Opium and its derivatives should best be avoided, as causing disturbance of the general functions. When the pains are distinctly spasmodic, great benefit is derived from *gelseminum*, but the dose must be large (3j. of tincture.) In some cases distressing pains give place to quiet sleep. *Conia*, in suppositories containing one grain, is of great use, repeated every four hours. More than two are rarely necessary. The effects of these two

drugs are more permanent than that of the others. Where the pain is less distinctly spasmodic, but is characterized by constant aching and tenderness in the womb, very good results come from quinine and hydrobromic acid, with a liniment of aconite, belladonna, and chloroform on spongio-piline or wool covered by oiled silk. Very severe pain yields quicker to full doses of *quinine*—four or five grains every four hours, with or without belladonna.

The rectum is the best medium for administering any drugs which are applicable to that method.

Our aim, if we wish to avoid or mitigate these pains, must be to endeavor to correct any unhealthy state of the womb by furthering involution, later by proper treatment and by obtaining as long a period of rest for the organ as possible; during pregnancy, by preserving a high standard of health and removing causes which tend to lower nerve force; during labor, by husbanding the strength both of the uterus and patient, by securing for both proper intervals of rest, by giving support in the form of strong soups, or meat if it can be taken, and by rendering mechanical assistance as soon as it can fairly be done, if labor threaten to become lingering, without waiting for actual inertia to supervene; after delivery, by insuring efficient contraction by gentle means, by obtaining complete rest, local and general, and by inducing sleep as soon after as may seem fit. Chloral is far better than opium for this purpose, and among other reasons not the least is, that it does not prevent (as opium) uterine contraction. It is also advisable not to apply the child too early to the breast, for if it sucks vigorously before milk is secreted, great pain often results, or an irritable condition is induced, in which the uterus and its nerves are not slow to participate. If the interval between delivery and the first flow of colostrum be employed in obtaining quiet and sleep for the mother, and in giving as much nourishment in any form as she can take, avoiding excess of fluids, when the breasts fill and the child begins to draw the nipple, the uterine contractions which result will be in most

cases unperceived, or, at most, the pain will never be so great as to disturb sleep.

3. *Rheumatic After-pains* will respond best to anodynes externally, with salicin or salicylate of soda and quinine internally, and the avoidance of the sources of irritation before mentioned.

4. *After-pains connected with Utero-Ovarian Nerves.* This pain is a genuine neuralgia of the pelvic nerves, and any treatment, be its object the prevention or the cure of the pain, must, if it is to be successful, be based upon this understanding. The patients who are most prone to suffer from these pains belong especially to that class whose physical defect lies in their nervous system. They are rarely quite free from all aches and pains, but suffer chiefly from spine-ache with tenderness on pressure over the vertebræ; from pain in the ovarian regions, especially the left; from intercostal neuralgia, mammary pains, migraine, and such like. In them a sensation which in another escapes notice is pain, ordinary pain is agony. Many doubtless willfully or unconsciously exaggerate, but as many more bear abundant witness to the reality of their suffering in their general condition. The pains which they suffer are identical with those they have felt before at the menstrual period, or when their tide of health was rather lower than usual, and depends upon the same cause, pelvic excitement. They undoubtedly require identical treatment. A girl who has thus suffered before marriage is, save in some exceptional cases where marriage itself or diversions attending it remove the depraved nervous condition, almost sure to suffer during pregnancy and after-delivery, even though it be her first conception. Careful treatment during pregnancy is in all these cases well repaid. Our one aim must be to combat the constitutional defect by all the adjuncts of change of scene, exercise in the open air, and any means of raising the tone both of nerve and muscle. "Early to bed" is indispensable. Everything is to be avoided which tends to excite or depress the nervous system. Local pain and discomfort is to be avoided by the use of well-fitting belts to prevent dragging on the broad ligaments, and by passing part of every day recumbent upon a couch or

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bed raised at the foot. Irritability or uncertainty of t
which is very commonly present, responds best to the u
*bromides*. These, also, as well as hot applications to t
men, best control too vigorous fœtal movements. If
present, and a tonic seems necessary, zinc, valerian,
phosphorus, quinine, or bark, with hydrobromic acid,
and other sedatives, will be most useful, and in some
especially if the periods have been pale before mar
four great requirements are *food, sleep, local rest*, an
*all disturbing influences*. Treatment during labor a
be on almost the same lines as for spasmodic pains.
sedative liniments are especially useful. Where, f
of the labor, much general stiffness is to be expect
are obtained from the use of *tinct. arnicæ*, ℥x.
It is surprising in how many of these cases a
mulation helps to keep up the pain, a continge
always be kept in mind.

5. *Disturbances of the Cerebro-Spinal Syst*
any special treatment, be they motor or sen
morphia are most frequently useful.

6. *Pains in the Rectum or Bladder* only
press upon us the necessity of ascertainin
pendent upon their imperfect evacuation
distention, however, requires closer atten
doubt that, especially in persons with
ordinary diet of the lying-in room, consi
during the earlier days, of slops in
chiefly to blame for this. Some blam
want of support to the abdominal wa
bandaging after labor. Patients who
should have a generous diet, with v
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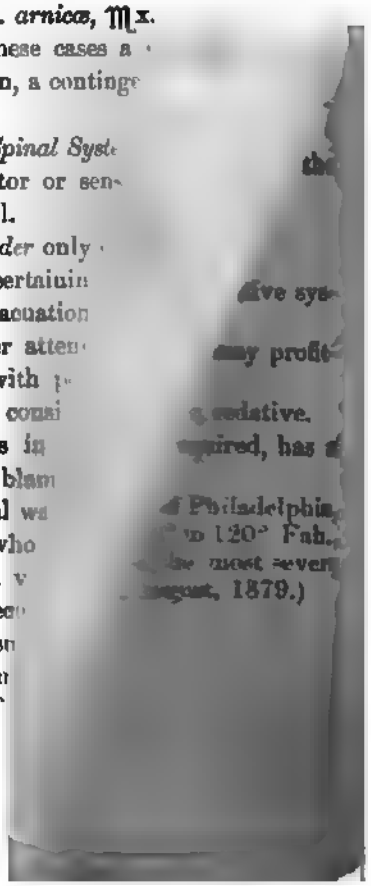
firm and evenly-distributed pressu
flatus accumulate, anti-spasmodics n
an enema of turpentine and asaf
present, must be corrected. If t



hypodermically will best relieve it whilst curative means are in course of trial. Poultices with mustard or fomentations with turpentine, followed by laudanum on cotton-wool, often give great relief.

### ALFRED MEADOWS, M. D., LONDON.

This author believes after-pains to be healthful in a certain sense; but if excessive, he would give henbane and camphor, lettuce and chlorodyne, morphia, which is better than opium, and the liquid extract of the British Pharmacopœia is the best of the opiates. The regular application of the child to the breast suffices to expel clots from the uterus.

### PROF. W. S. PLAYFAIR, M. D., LONDON,

Advises an opiate, or if the lochia be scanty, a linseed-meal poultice sprinkled with laudanum, or the chloroform and belladonna liniment. Quinine in ten-grain doses is excellent, especially when the pains are neuralgic in character.

### PROF. TYLER SMITH, M. D., LONDON,

Counsels the removal of any coagula that may be in the uterus. When the pains are neuralgic, an opiate, and a warm linseed-meal poultice, with laudanum sprinkled on it, applied to the abdomen, afford great relief. An anodyne embrocation applied to the breasts is of service.

### BERNARD KELLY, M. D., OF LONDON,

Has found (*Medical Press and Circular*, February 20th, 1878,) small doses of opium, frequently repeated, combined with an alkali or acid, as indicated, to answer an excellent purpose. It is much safer than giving a single large dose, which has a tendency to suddenly paralyze nervous action, and subsequently

lead to passive enlargement and congestion of the uterus. This objection derives additional force from the occasional presence (often unsuspected by the young accoucheur) of albumen in the urine, and the consequent danger of uræmic convulsions; when, if a large dose of the narcotic be blindly administered, fatal effects will almost inevitably follow. Here there is no remedy to compare in safety and value with the old-fashioned *tincture of iron*, which may be given, properly diluted, in large doses and *ad libitum*. When pains, unattended by uterine action, follow labor, ergot may be advantageously prescribed. But to exhibit it in cases where the viscus is already, so to speak, madly in action, would be simply applying spurs to the willing horse.

## RÉSUMÉ OF REMEDIES.

*Actæa Alba.* The white cohosh in tincture or infusion is alleged by the eclectic practitioners to be a specific in after-pains.

*Camphora*, in the form of camphor-water, or pills, gr. ij., of the powder, may be used with advantage.

*Chloral*, in moderate doses, will usually be found efficient.

*Hyoscyamus* is well spoken of by Dr. MEADOWS.

*Lupulina*, from its specific sedative effect on the generative system, has been suggested.

*Opium* and its alkaloids are extensively given, but may profitably be supplanted by other anodynes.

*Potassii Bromidum* is a safe, and usually an efficient, sedative.

*Quiniæ Sulphas*, in doses of gr. x., repeated if required, has a great deal of testimony in its favor.

*Hot-Water Injections.* Dr. ALBERT H. SMITH, of Philadelphia, has found that hot-water injections, 110° to 120° Fah., will always relieve, and often arrest, the most severe forms of after-pains. (*Med. Times*, August, 1879.)

# PUERPERAL HEMORRHAGE.

Hemorrhage may occur either before labor or after it. Antepartum hemorrhage may be due to the existence of placenta prævia, which generally is manifested by the bleeding occurring about the seventh month; or to the accidental detachment of the placenta, or the rupture of a large vessel of the mouth or neck of the uterus, or in the vagina. This latter may be expected where the presence of varicose veins is observed about the abdomen, thighs, etc. We have reason to believe that the same condition may exist within the labia and vagina. When hemorrhage occurs, until the os is sufficiently dilated to permit of delivery and a speedy termination of the labor, plugging the vagina is the only resource. This may be accomplished by the use of cotton, wool, etc., saturated in a styptic glycerine, or by the colpeurynter, which fully closes every avenue for the escape of the blood, and acts efficiently as a dilator of the os. This should never be filled with air, for should its walls give way above, the air would be forcibly driven into the uterine veins, and death would be inevitable.

### DR. S. S. MOSES, OF MISSOURI.

Some suggestions, the result of thirty years' practice, are made by this practitioner in the *St. Louis Courier of Medicine*, March, 1880.

*Preventive Treatment.* If the patient is of full habit, plethoric, with strong pulse, occasional headache, the judicious physican will endeavor to relieve this condition by diet, saline purgatives, and, if necessary, venesection.

If, on the contrary, the patient is of a relaxed leuco-phlegmatic temperament, by proper exercise, tonics, the best of all, good beef-essence, and chalybeates, endeavor as far as possible, to invigorate and improve the general health.

[illegible] just before the birth of the

[illegible] too suddenly, and firmly com-
[illegible]

[illegible] of the bleeding, Dr. M. does not
[illegible] He states that he has used with ad-
[illegible] of *bandaging the extremities*, applying to
[illegible] to keep as large a supply of blood in the
[illegible]

DR. ISAAC E. TAYLOR, OF NEW YORK.

[illegible] arresting the blood and exciting the muscular
[illegible] of the uterus to proper contractions this
[illegible] (*Independent Practitioner*, Feb., 1880,)
[illegible] presented in the following propositions:

[illegible] action or spanking the child's back moderately,
[illegible] then, after the delivery of the shoulders, per-
[illegible] in and the extremities of the child to remain in
[illegible] and the feet thus placed in apposition with or in the
[illegible] remaining for fifteen or twenty minutes or more
[illegible] withdrawn. Pressure over the uterus by the
[illegible] till the delivery of the child, which should
[illegible] as it might effect the delivery of the child
[illegible] gained our object, and at the same time the
[illegible] quick but gentle, and not too harsh, and
[illegible] the delivery of the child is completed.
[illegible] the delivery of the placenta, should hemorrhage
[illegible] abdomen, and flagellate it with a towel doubled
[illegible] in the hand, saturated or not with ice-water.
[illegible] and powerful strokes should be made, when the
[illegible] erus will be almost immediately felt contracting
[illegible], no matter how profuse or rapid the flow may be.
[illegible] contraction ensue and relaxation take place, a

milder application of the same means may be resorted to, till the contraction is deemed secure, and other measures adopted, if necessary.

There can be no procrastination or temporizing action in these sudden and violent cases. The appearance of the method to those present, or to the patient herself if conscious, with the suddenness and rapidity of its appplication, may seem harsh, abrupt and unnecessary. We have, however, nothing to do with appearances or feelings in such critical emergencies. We are imperatively reminded that life or death is swaying in the balance. Duty commands decided and prompt action. By this procedure Dr. T. has in some instances had the gratification of feeling the apparently lifeless organ fold itself up under the touch, the uterus contracting or contracted, and the patient's life safe certainly for the time being. In the course of thirty-five years, practice he has had to introduce the hand into the uterus to deliver the placenta but three times. This is an enormous advantage of this mode of treatment, when it is considered how frequently the hand or finger of the accoucheur conveys the septic poison into the blood.

### DR. GEO. J. ENGELMAN, OF ST. LOUIS,

Gives, from his own experience (*St. Louis Med. and Surg. Jour.*, July, 1880,) the following as the most rational and successful rules for the treatment of post-partum hemorrhage:

#### A.—PREVENTIVE TREATMENT AFTER INDUCTION OF LABOR.

1. Careful attention to every detail, and strict observance of obstetric rules in *every* case of labor.

2. The administration of a full dose of ergot as the head enters the vaginal orifice.

3. Should hemorrhage threaten, follow the uterine fundus with the firmly superimposed hand.

4. Express the placenta by Crêdé's method, and retain a firm grasp upon the fundus.

### B.—TREATMENT OF AN EXISTING HEMORRHAGE.

1. External manipulation, pressure, and friction with the cold hand, or with ice.

2. Ergot—best subcutaneously, one or two large doses, whilst other manipulations are in progress.

3. Introduction of the hand into the vagina, and if no contractions follow, into the uterus; removal of the clots and irritation of the surface, in order to stimulate contractions.

4. The subcutaneous administration of ether.

4*a*. Ice or vinegar, if at hand, may now be tried in the uterine cavity, but if they fail, must not be persisted in.

5. The hot-water douche, which, if it is not followed by the desired contraction, will at least stimulate the patient, and cleanse the cavity, so that the final, safest and most reliable remedy may be resorted to.

6. The iron swab. This may be used at once, if the introduction of the hand and the subcutaneous injection of ether fail, or after the trial of the hot-water douche; but in desperate cases must be resorted to at once, without losing time with other less reliable methods.

### PROF. W. S. PLAYFAIR, M. D., LONDON,

Gives the treatment by puncture of the membranes as the most efficacious; plugging the vagina, or, better, the cervix itself; turning, of course, when dilatation admits of it, as after the previous plan; separation of the placenta, especially when the child is dead, when it is not yet viable, when the hemorrhage is great and dilatation is not sufficient for turning, when the pelvic passages are too small for safe and easy turning, when the mother is too exhausted to bear turning, when the evacuation of the waters fails, or when the uterus it too firmly contracted for turning.

This operation is performed by passing one or two fingers as far through the os as they will go; feeling the placenta, pass the

finger between it and the uterus, sweep it around so as to separate the placenta as far as can be reached; if the membranes can be reached and have not been already opened, tear them. Generally the hemorrhage soon ceases.

He recapitulates: Before viability, temporize, by absolute rest in bed, cold, astringent pessaries, etc. After the seventh month, terminate the pregnancy. In all cases, rupture the membranes. If the bleeding ceases, leave the case to nature; if not, turn, if it can be done, or plug carefully, and endeavor, by compression and ergot, to bring on labor. Do not leave the plug in but a few hours. If necessary, use Barnes' bag to dilate; this also acts as a plug. Separate the placenta from its attachment to the cervix.

Of course, all these methods would apply for any form of antepartum hæmorrhage. The great hæmostatic is uterine contraction.

PROF. F. WINCKEL, M. D., DRESDEN, GERMANY.

When from absence of contractions, give ergot three grammes, every fifteen minutes; cold injections into the vagina; compression with the hand is preferable to all other measures. If prostration is the cause, claret, one to two teaspoonfuls every five to ten minutes. If all else fails, styptics must be applied to the inner surface of the uterus, as ice, in small pieces the size of a walnut; or introduce liq. ferri sesqui-chlorid. by means of a cylindrical wad of cotton-wool soaked in it; or inject equal parts of iron and water with Braun's syringe.

When stricture and irregular contraction are present, and the patient complains of severe after-pains, anti-spasmodics are best, as pulv. ipec. comp., laudanum, an emetic, or a sinapism over the sacrum after the clots have been removed from the uterus. Enemata with twenty drops of laudanum, an emulsion of bitter almonds, with twenty drops of extract of hyoscyamus, are of great service.

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NGSTON, N. C.,

*d*, Sept., 1877,) proposes the
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Y, OF PARIS,

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ve the pubes. Spite of injections of
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bath, the loss was much diminished;

after the second, it was suspended. It recurred in thirty-six hours, but a third bath arrested it, and involution was rapidly completed. A similar case set in twenty-seven days after delivery. It was continuous and profuse. A hot bath of twenty minutes' duration entirely stopped the hemorrhage. He attributes the benefit to the relief of uterine congestion, consequent upon the dilatation of cutaneous capillaries, the resulting determination of blood to the surface, and diminished vascularity of deep-seated organs. The baths are of a temperature of 34° Cent., and the immersion from twenty to thirty minutes.

### DR. KOEHLER, OF GERMANY.

This writer (*All. Med. Central-Zeitung*, No. 1, 1879,) states that he has, for the last seven years, in cases of uterine hemorrhage, applied *warm fomentations* to the head, to prevent anæmia of the brain, and also to the heart. Hot sand-bags are also very efficient, and the patients often will bear sand which is so hot that it can scarcely be touched with the hand. As soon as the fomentation or bag has been applied, consciousness is restored; the pulse grows stronger; the patient herself states that she feels better; that the ringing in the ears has ceased, and that she likes the appliance. As soon as it becomes cooler, she wishes it to be renewed. Dr. KOEHLER has, he says, saved patients even in the most dangerous cases of hemorrhage, by this proceeding, by which the physician never loses time, as the fomentations may be watched and renewed by any one.

### JAMES BRISBANE, M. D., OF LONDON,

Uses perchloride of iron by the "ready method;" it acts like a charm. Nothing more is required than to carry a two-ounce bottle of ordinary tincture of the *chloride of iron*. A piece of sponge is compressed in the palm of the hand, and the iron poured on it, and thus conveyed up to the bleeding surface of the uterus, there pressed and left. The blood coagulates, the womb contracts, and the danger is over. At the next visit, the sponge is found in the vagina, and no bad results follow. It is better

than injections, no time is lost, and the objections of thrombosis, injecting air, etc., are obviated.

### PROF. KARL SCHROEDER, BERLIN.

This author counsels the *tampon* or colpeurynter, etc.; as soon as the dilatation will allow it, a finger should be passed to one side when the placenta is lateral, and an effort made to turn by one foot. When the placenta is central, one cotyledon is to be separated from the side of the os, and then the foot sought for. One foot is to be brought down, and so on until the delivery is complete. It is, however, advisable to continue with the tampon until the head is firmly pressed against the bleeding surface, or until dilatation will allow of turning. It is always best for mother and child to turn as soon as practicable, and only to omit doing so when the head stops the bleeding. The forceps may be used if necessary. If the child is dead, the placenta may be separated entirely, and delivered before the child.

Hemorrhage may also arise from the vessels of the cord, and the child is in great danger. Here the rupture of the membranes should be delayed as long as possible, and the rubber-bag used until dilatation will allow of immediate extraction.

### ALFRED MEADOWS, M. D., LONDON.

Accidental hemorrhage is known by the blood being almost entirely liquor sanguinis. In placenta prævia, the vagina is filled with coagula. The treatment will be recumbent position, cool drinks, astringents, as the acetate of lead, two grains given in one-half a drachm of dilute acetic acid, to prevent its decomposition in the stomach, every four or six hours; or gallic acid; or sulphuric acid, as in the infus. rosæ comp., or both combined, which is far more powerful than singly; opiates in large doses. If these fail, plug the vagina. Avoid this if possible, when the time is not full, as it is liable to bring on labor. The plug must be firm, and the vagina completely filled. Its effects will be en-

hance-l if, at the same time, a firm bandage is placed over the abdomen. The vagina must be full, but not distended.

When the discharge is very great, with pain and pregnancy at full time, expedite delivery.

In placenta prævia, act according to the necessities of the case; plug and wait for dilatation, then turn and deliver. If there is not dilatation, and the loss is great, puncture the membranes, and secure dilatation with the rubber dilators, and deliver speedily. The separation of the placenta seems to be most safe.

When due to retention of the placenta, introduce the hand and peel it off with the utmost carefulness. In doing this, keep the other hand on the fundus uteri, so as to steady the womb. Next guard against the evil effects of decomposition by syringing with antiseptics. When due to atony of the uterus, use ergot, cold, pressure and galvanism. These failing, introduce the hand to excite the womb to contract.

When the womb relaxes after once contracting, support the patient with brandy; grasp the womb firmly, and by pressure cause it to expel its contents, or turn them out with the other hand. Irritate it by manipulation within and without. Ice may be introduced within the organ, or a cold douche thrown on the abdomen.

Electricity rarely fails to induce permanent contraction. Place one pole over the fundus and the other on the perinæum.

All failing, inject solution of perchloride of iron into the uterus, first clearing out all coagula. Remember the danger of this injection, and only use it as a last resort.

### PROF. WM. LEISHMAN, M. D., GLASGOW,

Epitomizes thus: The evacuation of the waters is best in partial placenta prævia, and where the membranes can be reached, and where the fœtus is immature.

Ergot and oxytocics may be given, but it must be remembered that these and the above render turning more difficult.

Plugging is called for, and may be applied in the vagina or

in the os uteri; it is a temporary expedient, and in turning is essential as a preliminary.

Extraction of the placenta is not to be done unless the circumstances are very exceptional, as when turning is impossible, and separation has failed.

Separation of the placenta is more justifiable, but the operation of turning is that in which the majority place the greatest confidence.

### PROF. FORDYCE BARKER, M. D., NEW YORK.

This author recommends the production of contraction by pressure by the hand; the removal of any blood clots that may remain in the uterus; ice in the vagina; injection into the uterus of half an ounce of the solution of the subsulphate of iron, diluted with an equal measure of water; and internally administer thirty drops of the fluid extract of ergot with twenty drops of the tincture of nux vomica every half hour, until well assured that the uterus is well contracted. If the patient has suffered a severe shock from loss of blood, twenty drops of laudanum and alcoholic stimulants should be given, and repeated at short intervals until reaction is restored, and then give the ergot and nux vomica.

If there be a portion of the placenta retained, the ergot and nux vomica should be administered as a precautionary measure.

If the hemorrhage results from a uterine polypus, Dr. BARKER recommends its removal with the vulsella forceps. If from laceration of the vagina or vulva, involving varicose veins or arteries, he recommends ligation or such local measures as are demanded in hemorrhages.

### PROF. T. G. THOMAS, M. D., NEW YORK,

Urges (*American Practitioner*, May, 1877,) the induction of premature labor in placenta prævia. It is the only method by which the danger can be avoided. It is a rational and perfectly war-

rantable means, and has no danger to be compared with that of non-interference. It removes the hazards incident to delay, and relieves the great anxiety of patients, friends and physicians.

GEO. T. HARRISON, M. D., NEW YORK,

Gives the resources thus (*Am. Jour. Obstet.*, No. 36, p. 576): They are enumerated in the order they are to be employed—(1) Friction, kneading and compression of the uterus. (2) Hypodermic injection of ergot above the symphysis pubis. (3) Injection of hot water at a temperature of at least 100° F. into the uterine cavity. (4) The injection of Churchill's or U. S. tincture of iodine into the uterus.

Ergot, thus hypodermically used, he says, unfolds its peculiar power over the muscular tissue with a degree of promptness and certainty of which those who know of the action of the drug only through the other modes of administration can have no idea.

He refers to intra-uterine injections of ergot in the following manner: Remove coagula; then, with a Davidson syringe, wash out all blood with cold water, and quickly inject into the cavity f. ℥ ss. Squibb's fluid extract of ergot, with water f. ℥ iv. The effect has invariably been to bring on promptly strong, permanent tonic contraction of the muscular fibres of the uterus.

Dr. STRUDWICH has tried it in six cases of hemorrhage, and says it surpasses Monsel's styptic.

He has never been disappointed in ergot thus applied, and confidently recommends its use to those who have never tried it. Its superiority over the iron treatment must be obvious to any intelligent practitioner, since the latter application is often followed by serious consequences, and is never used without grave apprehensions of serious results, whereas the ergot is perfectly harmless and unirritating.

Some critic may say the result obtained should be ascribed to removal of coagula and cold injections, etc.; but such is not the case, since after trying all those measures repeatedly—with ergot by mouth and rectum—each time only bringing on slight trans-

ient contraction, until ergot was tried, with the *unfailing success which always attends its use when thus applied.*

### PROF. W. S. PLAYFAIR, M. D., LONDON,

Urges preventive treatment in all cases. The hand should be kept upon the womb until the placenta is expelled, and continuous contraction kept up for at least half an hour after delivery, by grasping the contracted womb with the palm of the hand and preventing its relaxation. It is also good practice to give a full dose of ergot after the placenta has been delivered. When the previous history causes an expectation of hemorrhage, the ergot should be given, and preferably hypodermically, about ten or twenty minutes before the labor is expected to be concluded. Then any means should be taken to insure contraction of the organ, and it is advisable to rupture the membranes early, as soon as the os is dilated or dilatable, to insure stronger uterine action. Care should be had in all cases where the pulse is high some ten or fifteen minutes after the birth of the child, as hemorrhage often follows. Hence, never leave a patient until the pulse falls to the normal. After speaking of pressure, he alludes to another plan: pass the fingers of the right hand high up in the posterior cul-de-sac of the vagina, so as to reach the posterior surface of the uterus, while counter-pressure is exercised by the left hand through the abdomen. The anterior and posterior walls are thus closely pressed together.

Brandy must not be relied upon. In bad cases it merely fills the stomach, and may be thrown up unaltered. It may bring on intoxication, which is mistaken for coma of syncope, etc.

A drachm of *ether* may be injected hypodermically in great exhaustion. Give fresh air, keep the head low down, so that syncope cannot occur. Empty the uterus of clots or other foreign bodies.

*Intra-uterine injections* of warm water, 110° to 120°, are highly recommended. This succeeds after all the usual remedies fail, especially where the uterus contracts and relaxes.

A distended bladder will often prevent contraction. Evacuate it with the catheter.

Never plug the vagina.

*Compression of the abdominal aorta* is a temporary expedient, and supplements other means, as also when there is great exhaustion, the firm bandaging of the extremities with the elastic bandage, to retain the blood in the trunk, and lessen the likelihood to syncope.

In the last extremity, inject the strong liquor of *chloride of iron*, diluted with six times its bulk of water, being very careful to exclude the air from the syringe.

The secondary treatment will be opium as a restorative, thirty to forty drops of Battley's solution by the mouth or in enema, quiet, beef-essence, milk, eggs, etc., in small quantities given frequently. Stimulants as demanded.

PROF. R. A. F. PENROSE, M. D., PHILADELPHIA,

Saturates a cloth with common *vinegar*, and passes it into the uterine cavity, and squeezes it. In a paper read before the American Gynecological Society, he claims that this procedure rarely fails to stop the flow immediately. It can be easily obtained. It can be easily and instantly applied without apparatus. It has never failed in his practice. It is sufficiently irritating to excite the most sluggish uterus to contraction, and yet not so irritating as to be subsequently injurious. It is an admirable antiseptic. It acts upon tthe lining membrane of the uterus as an astringent.

H. P. C. WILSON, M. D., BALTIMORE,

Urges the introduction of the hand within the uterus, and raking the surface which has been occupied by the placenta with the finger-nails. He says that in one case no further hemorrhage occurred, though the uterus did not contract, and its mouth remained open for nearly an hour after this operation.

[illegible]. Dr. Wm. Donovan, however (*Edinburgh [illegible] Jour.*, June, 1875,) says in doses of gtt. xx. p. r. [illegible] he never knew it to fail.

[illegible]. A teaspoonful of tincture of capsicum will often prove the best of stimulants in atony.

[illegible] as at once a styptic and antiseptic, has been preferred [illegible] intra-uterine injections by some writers.

[illegible] has been used in large doses by the mouth, in hypodermic injection, and locally as an intra-uterine application. Dr. Lombe Atthill says that it is a most uncertain agent, and while most useful if administered some time before the occurrence of the hemorrhage, is, in his opinion, seldom of much value if given after it has set in. Ergot takes at least twenty minutes to act, and besides is often in these cases vomited. Injected hypodermically, it is capable of doing much good; but its irritating properties when thus used, render this method of employing it not altogether unobjectionable.

[illegible] *Canadense*, the "squaw-weed," has a popular reputation as a hæmostatic in uterine hemorrhage. A teaspoonful of the infusion or five drops of the oil, may be given every half hour in light cases.

[illegible] has been used in hypodermic injection and as spray to the [illegible]gastric region. The former has been especially recommended by Prof. Von Hecker, of Munich, in conditions of collapse from hemorrhage. The chief point to be attended to in making the injection, is to pass the syringe well down in the subcutaneous cellular tissue; otherwise troublesome abscesses may form at the seat of the injection. The quantity to be injected depends entirely on the pulse. Professor Von Hecker frequently injects from two to four drachms at short intervals. The effect is very transient, so that the injection may have to be repeated.

[illegible] *Tinctura*, strongly eulogized by Barnes, Atthill, Hicks, and others as an intra-uterine injection, has been severely condemned by Dr. Snow Beck as dangerous. In certain desperate cases it seems the only resource which is efficient. (See page 410.) The tincture may be diluted, or used of full strength. The tube of the syringe should be carried to the fundus,

and the contents gently injected; or a sponge or wad of cotton may be steeped in the solution and carried to the fundus. It should also be freely given internally in those cases where sluggish bleeding takes place for two weeks after delivery.

*Ferri Sulphas* and *Monsel's Solution* have at times been used, and may have some advantages over the chloride. Dr. WILSON, of Baltimore, states that the sub-sulphate should be combined with glycerine, as the simple solution acts as an irritant. Others use f. ʒ ij. of Monsel's solution to water f. ʒ vj., to wash out the uterus. It is sure to check the hemorrhage, but the sequelæ may not be agreeable.

*Iodinii Tinctura* has been used, some employing several drachms of the pure tincture, others diluting it in the proportion of f. ʒ j. to water f. ℥ j. In a paper read before the Obstetrical Society of London, October, 1874, Dr. TRASK recommends this article as an injection into the cavity of the uterus, in hemorrhage after delivery, as perfectly safe—at any rate, free from the evils incident to the employment of iron. It is an antiseptic, and is probably the surest of all means of counteracting a tendency to absorption of septic matter into the system after delivery. Dr. FORREST, (*Med. Record*, September, 1880,) thus sums up its advantages: 1. Iodine controls the hemorrhage not by coagulating the blood in the uterus, but by exciting contraction. The blood is expelled in a liquid form, and instead of leaving the uterus filled with a mass of hard, sticky clots, ready to undergo decomposition, the uterus is emptied and disinfected. 2. Iodine has never done any harm, even when injected in its full strength. In one case nearly six ounces were injected, four of these being undiluted. 3. The iodine never fails to control the bleeding.

*Ipecacuanha.* In some cases a full dose of this drug, bringing on rapid emesis, causes strong contraction after inertia, and promptly checks the hemorrhage.

*Nitrite of Amyl* has been used by Dr. E. W. KERR (*Brit. Med. Jour.*, November, 1st, 1869,) with excellent effect. Five minims were administered through an inhaler.

*Plumbi Acetas.* Dr. J. WORKMAN, of Toronto, (*Canada Lancet*, January, 1878,) urges acetate of lead in large doses,

from one-half a drachm to one drachm; it will generally be found that in these large doses it acts as a moderate purgative within twenty-four hours; and, if it be desirable that, in order to avoid transformation, it should be expelled from the bowels in this way, it may be better to err on the safer side, which certainly is *not* its exhibition in *small* doses. In one case he gave six drachms in twelve hours. He quotes Dr. DANIEL CLARK and others of eminence, who give it in even larger doses, and with like good result.

*Viscum Album*, the mistletoe, has been introduced as an agent in post-partum hemorrhage by Dr. W. H. LONG, U. S. M. H. S. (*Louisville Med. News*, March, 1878.) But as it requires "from twenty-five to fifty minutes" to produce uterine contractions, its efficiency is slight.

## GENERAL MEASURES.

*Cold.* This should never be neglected. Fanning the genitals, spinal ice-bags, injections of ice-water, a lump of ice in the uterus, ether or rhigolene spray to the hypogastric region, spine or thighs, are some of the methods in which it may be used. A tumblerful of ice-water flavored with brandy will sometimes act like magic, when given just after the second stage is completed.

*Compression of the Abdominal Aorta* may be carried out in thin subjects with delicate abdominal parietes.

*Electricity and Galvanism* have been found of decided advantage in some light cases, but cannot be depended on in severe ones.

*Heat* is at times more energetic than cold. CHAPMAN'S spinal hot-water bags have been spoken of for the purpose. Dr. WINDEBRAND reported (*Deutsche Med. Woch*, June, 1876,) a desperate case where he threw into the uterus water at 120° F. by means of a uterine tube, which immediately caused a renewal of the pains, which, after an interval of five or ten minutes, and some eight or ten injections had been made in the meantime, ended in the expulsion of the whole of the contents of the uterus. Other cases have been reported by ATTHILL, MANN, etc. Dr. KOEHLER (*Gazeta*

*Ckarska*, No. 8, 1878,) has obtained relief in the most desperate cases by applying very hot sand-bags to the head and cardiac regions. They are particularly useful to prevent collapse, and do not interfere with other means.

***Mammary*** excitation, by applying the child, the mouth of the nurse or a cupping-glass, to the mammæ, will occasionally excite uterine contractions.

***Massage*** of the uterus by gentle and continued "hand-kneading" is a simple and valuable plan to awaken the muscular contractility.

***Position*** is always of great value. "It is most important," observes Dr. J. H. AVELING (*Influence of Posture on Women*, 1879,) "that every woman suffering from uterine hemorrhage should be immediately placed in a recumbent position with the hips raised as far above the level of the shoulders as can conveniently be effected."

***Pressure.*** "The value of pressure on the fundus," says Dr. ATTHILL, "can hardly be overestimated. It should be combined with friction." Mr. DAVID CHRISTIE (*British Medical Journal*, June, 1878,) describes a method of arresting uterine hemorrhage by *fluid pressure*. He introduces an elastic bag into the uterus, connected with a tube seven feet and a half in length, the free end of which, after the bag is filled, is placed in water at the proper height. Mr. CHRISTIE reasoned that, as a tube placed in an artery has a column of water raised seven and a half feet by the heart's action, so his method would effectually arrest any hemorrhage that could occur, and allow the womb to contract and relax without the pressure of the water being interfered with.

***Sinapisms*** to the extremities are among the means currently used, but are not very efficient. These are aimed to bring the blood to the limbs. With a somewhat similar idea, Dr. MÖLLER, of Vienna, has recommended (*Wiener Med. Presse*, No. 8, 1874,) applying the Esmarch bandage to the arms and legs.

***Transfusion*** has been growing in favor of recent years, in desperate cases of bleeding. The forms of transfusion most employed and attended with the best results are:

1. Transfusion with defibrinated blood.

2. Mediate transfusion with pure blood.
3. Immediate transfusion from "*vein to vein.*"
4. Immediate transfusion from "*artery to vein.*"

The first and third methods are most generally adopted—the danger of clots is avoided. The second is generally abandoned, as leading to embolism, etc. Instead of blood, Dr. J. W. HOWE (*N. Y. Med. Jour.*, 1875,) recommended goat's milk; and Dr. T. G. THOMAS and others have successfully employed cow's milk. The conclusions reached by Dr. THOMAS are embraced in the following propositions:

1. Injection of milk into the circulation, in place of blood, is a perfectly feasible, safe, and legitimate procedure.
2. In this procedure, none but healthy milk, drawn from the udder of the cow within a few minutes of its introduction into the vein, should be employed.
3. A glass funnel, with a rubber tube and a suitable pipe attached, is much better and safer than a more elaborate apparatus.
4. Intra-venous injection of milk is an infinitely easier operation to perform than transfusion of blood.
5. Intra-venous injection of milk, like that of blood, is commonly followed by a chill and rapid rise of temperature; but these symptoms soon subside, and are replaced by a great improvement in the general condition of the patient.

# PUERPERAL ECLAMPSIA.

For many valuable points on the prophylaxis of this complication, see *Albuminuria*.

### DR. JOSEPH AMANN, MUNICH.

Little can be accomplished in the way of prophylaxis. In treatment, the present position of science indicated that the remedies to be relied upon are exclusively the narcotics, *chloroform, opium, morphia and chloral.* The rule is to give whichever one is selected until it produces complete loss of control over the voluntary muscles. The first principle is *to secure complete narcosis.* To do this successive doses must be given until the amount required to bring about this condition has been taken.

In urgent cases, *chloroform* effects this result most promptly. It should be pushed to complete anæsthesia. It is, however, not wholly without danger, especially when cardiac affections are present. *Morphia* acts more slowly, and is to be preferred when the case is less urgent. The proper dose is gr. $\frac{1}{3}$ subcutaneously; in 15 to 30 minutes it may be repeated if indicated. The effect lasts several hours or half a day. *Opium* is best given as an enema, gtt. xxv. of the tincture in f. 3 vij. of a vehicle, repeated until narcosis is produced. *Chloral* is also valuable. It is preferably given by the mouth, in doses of gr. xl.–l., in solution or as enema.

In regard to *venesection*, it should be confined to special cases, namely, those in which positive symptoms of plethora are present, and then only when the convulsions occur *before labor;* certainly during and after labor, blood enough has been lost, and there can be no sound reason offered for taking more. Experience shows that the benefits from this measure have appeared in præparturient cases.

The *wet pack*, recommended by some writers, can do no harm

2. Mediate [illegible] there are cases in which it will be
3. Immediate [illegible] ever, to be supplemented by the admin-
4. Immediate [illegible] manner above described.

The first [illegible] adopted—the [illegible] is general[illegible]

KARL SCHROEDER.

Instead of [illegible] 1875.) [illegible] treatment, the abstraction of blood, THOMAS and [illegible] nesection has often given favorable milk. The [illegible] suits, but frequently the attacks have embraced in [illegible] taken a more unfavorable course. A 1. Injec[illegible] blood. [illegible] would be the paralysis of the activity of coduce[illegible] this can be done by narcotics; thus 2. In[illegible] checked for hours, and the blood is from the [illegible] HENSON has shown by experiment that introduce[illegible] the blood pressure in the arterial system. [illegible] in favor of this treatment; but to be elal[illegible] must be absolute, so that the voluntary [illegible]ment. As long as an eyelid quivers, an-[illegible] Chloroform will do this, but as it must [illegible] better; or if haste is necessary, chlo-[illegible] it by subcutaneous injections of mor-[illegible] of great advantage, and may also be used [illegible] enema of mucilage of starch, half cupful [illegible] in an ounce of decoction of althæa.

[illegible] safely be omitted. No obstetric manipula-[illegible] the safety of the mother, but labor may be [illegible] child.

W. S. PLAYFAIR, M. D., LONDON.

[illegible] grounds for believing that blood-letting is of [illegible]e, and that it may even increase the convulsive [illegible] special cases, as where there is evidence of great [illegible] and vascular tension, as a livid face, a full-[illegible], and strong carotid pulsation, the patient a [illegible] woman, it may be employed. Even here, a sin-[illegible] is all that is ever likely to be of service.

As a temporary expedient, the carotids may be compressed.

Purgatives to remove any irritant matter lodged in the intestinal tract, may act well; as the comp. jalap powder in a full dose, or a drop of croton oil, or a quarter of a grain of elaterium may be placed on the back of the tongue.

Chloroform may be used to control or ward off the paroxysm. It is advisable, however, to have a remedy more continuous in its action, and requiring less personal supervision. Chloral is decidedly this remedy, and, in combination with bromide of potassium, in the proportion of twenty grains of the former to half a drachm of the latter, repeated at intervals of from four to six hours.

Dr. HARRIS, the American editor of PLAYFAIR, has used bromide of sodium and chloral with good effect at shorter intervals, and the chloral in doses of ten to fifteen grains.

If the patient cannot swallow, it may be given by enema. The remarkable influence of bromide of potassium in controlling the eclampsia of infants, seems to be an indication of its use here.

Morphia may be given subcutaneously in the dose of one-third of a grain, repeated in a few hours so as to keep up its effect.

Acetic and benzoic acid, as antidotes to uræmic poisoning, are too uncertain.

During the paroxysm, prevent the patient from injuring herself, especially biting her tongue, by placing something between her teeth.

As to the delivery, adopt that course least likely to irritate. If the fits seem to be induced and kept up by the pressure of the fœtus, and the head be within reach, apply the forceps, or even resort to craniotomy. Otherwise leave the case to nature.

### PROF. FORDYCE BARKER, M. D., NEW YORK.

This physician places among the exciting causes of puerperal convulsions, anæmia, albuminuria, uræmia, indigestion, constipa-

tion, retention of urine, excessive distention of the uterus, reflex pains, or moral shocks.

As a prophylactic, he removes as speedily and effectually as possible these exciting causes by appropriate treatment. If at the advent of labor, convulsions be threatened, he abstracts from the patient a moderate amount of blood, not enough to weaken her, but sufficient to restore the equilibrium of the circulation; he does not permit the bladder to become distended. If the patient is irritable, restless, complains loudly of little annoyances, and is sleepless, he tranquilizes her by a moderate opiate.

When the convulsion has occurred, he says, bleed at once, then give a brisk cathartic, as:

313. ℞. Hydrarg. chloridi mitis, gr. x.
Pulv. jalapæ, gr. xx. M.
Ft. pulv. No. j. Sig.—Take at once.

But if she be comatose, he mixes a quarter of a grain of elaterium with a third of a teaspoonful of butter, and places it upon the back of the tongue. This is to be repeated every half hour until active catharsis. To arrest and prevent convulsions, administer chloroform by inhalation.

Having overcome the immediate danger from convulsions by the means stated, he administers a full dose of morphia hypodermically.

## DR. CHARLES, OF BELGIUM,

In the *Memoirs of the Belgian Academy of Medicine*, 1876, sums up as follows the treatment of eclampsia in his memoir on the convulsions of parturient women, which was crowned by the Belgian Academy of Medicine:

1. Mechanical eclampsia from the sixth to the ninth month: (*a*) Bleeding, if the case be urgent, or if there be true or apparent plethora; (*b*) drastics, in all cases, which may be more or less replaced by diaphoresis; (*c*) chloroform when the fits are about to commence, and during the clonic convulsions; (*d*)

chloral in the intervals of the attacks, as an injection to beneficially fill the place of narcotics; any antispasmodic, such as bromide of potassium, may be added to it (*e*) to finish the delivery, if possible, bring on labor, if the fits do not show signs of disappearing; to bring on forced delivery in very serious cases.

2. Reflex eclampsia before six months gestation, and after delivery: (*a*) Bleeding is but very rarely indicated; (*b*) purgatives are always somewhat useful; (*c*) chloroform, chloral, etc., should be continued as in mechanical eclampsia, and antispasmodics should not be neglected.

3. Toxic eclampsia: Fulfill the symptomatic indications; general or local bleedings to combat congestion of the brain and spinal cord when it is very marked; cold applications to the head, purgatives, diaphoretics, baths, revulsives, narcotics, anæsthetics, etc.

M. DUNCAN, M. D.,

Comes to the conclusion (*Practitioner*, April, 1875,) that Bright's disease as a cause is over-estimated. A temporary appearance of albumen in the urine is no certain indication of Bright's disease. The treatment is to empty the uterus; but, if labor is only commencing, it should only be done if the symptoms are desperate; with severe and frequent fits, cyanosis and profound coma, move the bowels, draw off the urine; tide over the crisis with bleeding; chloroform and chloral are useful; chloroform must be used with great caution where cyanosis is great.

PROF. F. WINCKEL, M. D.,

Says venesection is very rarely required. Only the most imminent danger will be an indication for resorting to this measure. Generally severe attacks become milder when profuse perspiration is established after the delivery. Excite copious evacuations by drastics, as jalap, aloes, ext. colocynth, and enemata of vinegar and salt. As diuretics, tartaric acid, lemon juice, and flower

of benzoin may be given. During the attack, chloroform may be used. If this be of no avail, strong doses of opium are of great value. Hypodermic injections, if the patient be unable to swallow. If there is great central congestion, leeches may be applied to the forehead or behind the ear. Cold compresses, ice-bags, sinapisms to the back of the neck, or even cold irrigation of the head, are advisable. Afterwards, stimulants to prevent collapse when threatened, tonics and nourishment for hydræmia.

WM. BERRY, M. R. C. S., EDINBURGH.

For the treatment we have three periods:

*During pregnancy*, when we must employ purgatives, bleeding, chloroform and chloral.

*During labor*, chloroform and delivery.

*After delivery*, chloral and bromide of potassium. A single dose of thirty grains each of chloral and bromide will usually prevent a recurrence of the convulsion, and produce quiet sleep. (*Obst. Jour. Great Britain and Ireland*, April, 1878.)

ANGUS MACDONALD, M. D., EDINBURGH,

(*Obst. Jour. Great Britain and Ireland*, Aug., 1876,) regards as the most important, sedatives and anæsthetics, and especially chloral, chloroform, ether and bromide of potassium. He trusts chiefly to chloral, giving it in doses of twenty-five grains every six hours, so long as the fits continue or threaten. He believes that it acts to dilate the arteriols, thus favoring the disappearance of anæmia in the brain; acts as a sedative to the nervous system generally; allays muscular irritability and spasm, and thus tends to obviate cerebral congestions and extravasations.

A. E. AUST-LAWRENCE, M. D., BRISTOL, ENGLAND,

(*Obst. Jour. Great Britain and Ireland*, Oct., 1876,) feeds carefully on milk diet for the first three or four days. Robust women who have eaten well up to confinement, require an aperient within forty-eight or even twenty-four hours after confinement. He prefers:

| | | | | |
|---|---|---|---|---|
| 314. ℞. | Hydrarg. chlorid. mit., | | | |
| | Pulv. rhei, | āā | gr. ij. | |
| | Ext. belladon., | | | |
| | Ext. opii, | āā | gr. ½. | M. |

For one pill, to be repeated every six or eight hours till the bowels act—generally three are required.

He urges ergot for the first week or two, if the uterus does not involute as it should.

H. B. WHITE, M. D., BROOKLYN, N. Y.,

Employed jaborandi in the case of a primipara at full term, highly anasarcous, and urine very scant. The drug was given in infusion, one drachm of the leaves being used and divided into three doses at short intervals. After the first dose, profuse sweating and salivation ensued. There were three convulsions prior to, and several after, delivery. The article was continued for three days, drenching the patient in perspiration. She completely recovered.

PROF. OTTO SPIEGELBERG, BRESLAU.

This writer (*Trans. Am. Gyn. Soc.*, vol. II.,) states that the treatment must be directed to effect three objects:

1. The renal secretion must be restored.
2. The arterial pressure must be diminished.
3. Irritation of the nerve centres must be reduced.

These results are most easily attained by (1) venesection; (2) narcotics, and (3) if the patient be in labor, by its speedy completion.

Dr. G. M. STAPLES, (*Iowa Med. Soc. Trans.*, 1880,) strongly advises hypodermic injections of two to three drops each of tinct. rad. aconit. and Norwood's tincture of veratrum viride.

In the treatment of true eclampsia he places *venesection* first. As soon as the patient is seen, let the brachial vein be opened and from six to sixteen ounces of blood be taken; and this be repeated unless its effects are decisive. In mere eclamptiform attacks, bleeding may be omitted. Narcotics should be administered soon after venesection. Among them, *chloroform* is the most advisable. The inhalation must be guarded, and only take place when the aura of another attack is observed. Its administration may be combined with that of morphia or chloral; the former subcutaneously, the latter by the rectum; of morphia gr. ¼, of chloral gr. xliv. are sufficient doses to begin with. When there is coma, cold applications to the head are useful. In the paralytic stage, stimulants must be resorted to. Diuretics are useful of after-treatment during convalescence.

## RÉSUMÉ OF REMEDIES.

*Aconitum* has been used to reduce the arterial pressure. It is highly praised by PHILLIPS.

*Belladonna* is recommended by some writers as a sedative to the nervous system in these cases.

*Benzoicum Acidum*, as a diuretic, is valued as a prophylactic and to hasten convalescence.

*Chloral Hydras* acts as an anæsthetic, is claimed to be similar to chloroform in its effects, to allay irritation of nerve centres, and to have a decided effect in controlling convulsions from whatever cause. It thus relieves the physician of the difficulty of deciding whether the cause be plethora or anæmia, whether to bleed or not. But, like bleeding, it is accused of producing anæmia. It may be conveniently given by the rectum in an enema holding in solution gr. xxx.–lx. Dr. DELAUNY,

in a prize thesis, 1879, says that statistics show that puerperal convulsions treated by revulsives and antispasmodics show 50 per cent. of mortality, by bloodletting 24 per cent., and by chloral 13 per cent.

*Chloroform* is acknowledged by all authorities to be of the greatest value either with or without venesection. For particulars as to its administration, see anæsthetics.

*Hydrargyrum.* As there is a remarkable susceptibility to mercury in albuminuria, it should be given with great caution.

*Jaborandi and Pilocarpin* have both been advocated for their diaphoretic effects by MASSMANN, TEHLING, and others. (*Centralblatt. für Gyn.*, 1878.) The *modus operandi* is attempted to be explained on the TRAUBE-ROSENSTEIN theory of the convulsions. It is argued that the salivation and perspiration induced by the jaborandi or its alkaloid, relieve the excessive vascular tension. Two drachms of the fluid extract of jaborandi may be thrown into the rectum.

*Opium and Morphia.* These are invaluable narcotics in this disease. They are best administered, opium by the rectum, morphia hypodermically. In sthenic cases, they should promptly follow venesection. In the *Am. Jour. of Obstet.*, July, 1880, Dr. C. C. P. CLARK very strongly advocates large doses of opiates. He avers they will prevent convulsions as surely as quinine will break up intermittent fever, and its effect is no less absolute even after convulsions have actually set in. One to three grains of opium should be given daily for the premonitory symptoms. When a convulsion has actually taken place, a grain and a half of morphia should be given hypodermically at once; if a paroxysm occurs at any time after two hours, this dose should be repeated; if the patient is in labor she should have another dose after eight hours in any event. These doses are perfectly safe, for the disease involves a remarkable tolerance of the drug. Evacuant treatment is allowable, and perhaps useful, but the opium should be the main reliance. When properly used, he has never seen it fail to ward off threatened eclampsia; and he has never known a patient to die of the disease when the drug had been given in season, in suffi-

[illegible] quantity, and in the proper manner. Others assert that the opium treatment gives a frightful mortality. (*Obst. Gaz. Compend.*, July, 1880, p. 174.)

[illegible] The *nervous debility* which often remains after a severe case of puerperal fever is best treated by phosphorus and some easily assimilable tonic combination. [illegible] COLEMAN recommends the following (*Half-yearly Compendium of Med. Science*, July, 1880):

℞ [illegible] sulph., gr. ss.
[illegible] chloridi, f. ℥ ss.
[illegible] phosphorici diluti, f. ℥ jss. M.

[illegible] to forty drops in a wineglassful of sweetened water [illegible].

[illegible] is excellent as a prophylactic, gr. x. three [illegible] times daily. In the attack, it may be advantageously administered between the seizures combined with [illegible], of each, 3 ss.

[illegible] acts similarly to the potassic salt, and may be used in its place.

[illegible] has been much discussed as an arterial sedative. Some practitioners claim that it entirely does away with the need of the lancet. It may be given in subcutaneous injection of gtt. v.–x. of the fluid extract; or by the mouth, in doses of gtt. v.–xxx., repeated as required. If the pulse is full and above 80°, give the veratrum energetically. (*Trans. Am. Med. Assoc.*, 1876, p. 240.) Its use has been administered in twenty-four hours with success. Others fear the depressing character of this remedy, and do not favor it.

## GENERAL MEASURES.

[illegible] the use of ice to the head, spinal ice-bags, etc., is advisable in states of coma.

[illegible] in order to produce a derivative effect and relieve the kidneys, has been attempted, both by means of drugs, as pilocarpin, and by JACQUET, by enveloping the body in wet sheets wrung out in quite hot water. This can only be relied upon in mild cases, and rather as a prophylactic.

*Purgatives* diminish arterial tension, draw congestion from the renal regions, and are a rational mode of treatment. A full dose of calomel and jalap may be given if the patient is able to swallow; otherwise a drop of croton oil may be applied to the back of the tongue. In both cases an enema of castor oil and oil of turpentine, one tablespoonful of each in chamomile tea, should be thrown up the rectum. (SPIEGELBERG.)

*Transfusion* has been suggested by some writers, to follow venesection. Its value is undetermined.

*Venesection* is, in sthenic cases of true eclampsia, the most valuable of all remedial measures. See p. 420. It is not out of place, even in chloranæmic cases.

## PUERPERAL MANIA.

A. H. KUNST, M. D., WESTON, W. VA.,

In a paper read before the State Medical Society, gives the treatment as follows: His belief is that the tendency in such cases is towards exhaustion, hence depleting measures must be regarded with great circumspection; rarely is venesection justifiable. At the onset, if the secretions are locked up, a dose or two of calomel or blue mass, and warming laxatives, may be given according to circumstances, with great care to prevent a drain. If there be increased heat of the scalp, apply cold to the head. A warm bath in the evening will be useful and soothing, and promote sleep. The best hypnotic is a combination of chloral and bromide of potassium. Symptoms may, however, indicate hyoscyamus, conium, camphor, monobromated camphor, opiates, etc. Tranquillity should be invited and encouraged by the attentions of a trained nurse, and all interference prohibited. Husband the strength, and if necessary, use the camisole to restrain too constant movements. Diet should be nutritious and generous, and easy of digestion. Iron, quinine, phosphorus, etc., should be employed as indicated. If acute delirium occur, and she refuses food, use the œsophagus tube, and inject twice daily beef-tea, and milk, and eggs alternately.

The moral management is important, and she should be guarded against self-injury. Generally, the wiser plan is to remove her from her familiar surroundings, to change the train of ideas. Interviews with husband and friends should be restricted. Often she regards them as her enemies, and their visits add to the trouble. Exercise in the open air, with some light, congenial employment, is of great value. Convalescence should be aided by a few weeks at an agreeable resort, or pleasure traveling.

S. PUTNAM, M. D., MONTPELIER, VT.,

Says, in the *Transactions* of the Vermont State Medical Society, 1879:

First learn betimes the vulnerable points and tendencies of patients, and regulate their hygiene and medication accordingly. Should a latent albuminuria be found, let the patient live upon milk diet; use the warm sitz-bath at night, followed by abundant frictions to the back and limbs. In the morning, cold or tepid sponging, with friction, to be followed by walking, or carriage exercises. At lying-in, avoid as far as possible the causes of anæmia, prostration, irritation and excitement.

Should the patient be unable to sleep, make the conditions the most favorable to secure that result, and if sleep does not occur, use chloral, morphia and camphor, or whiskey in quantities ordinarily adequate to produce that effect, and we shall seldom have puerperal mania to treat. But should a threatening case explode, notwithstanding your care, perhaps a cathartic is needed, especially if constipation exists, after which a more efficient use of anodynes, stimulants and tonics may succeed. Should they not, and the delirium be violent, aconite, veratrum or digitalis might be used, or even anæsthetics. When uræmic delirium or stupor is evident, use ten grains nitrate of potassa, one drachm nitrous ether, and five drops of dilute nitric acid in water, every four hours; or instead, when insomnia persists, ten or fifteen grains bromide potassium every two hours, alternately with twenty drops tinctura ferri chloridi. Meanwhile, nutrients, stimulants and tonics are to be given as needed.

PROF. WM. LEISHMAN, M. D., GLASGOW.

We can scarcely doubt that when there are indications of cerebral disturbance, much may be done to ward off an attack, particularly where there is a hereditary taint, or where insanity has been present at previous confinements.

It must be remembered that it is essentially a disease of de-

at all, with very
a fatal result. It

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pium or other narcotics are not
hloroform has been employed bene-
ed fully under its effect, and so
, with ether or ammonia, and
for the same purpose. GOOCH's
has now superseded opium, and
. The warm bath is an excellent
in the failure of drugs. Procure
once recover.

AYFAIR, M. D., OF LONDON.

of the patient, calm the excitement, rest
ther-active measures, as bleeding, blister-
and the like, are distinctly contra-indi-

nourishment comes next. Give solid food prin-

cipally, reserving beef-tea and brandy later. Food must be given forcibly, if necessary.

Stimulants increase the excitement, and are only useful in melancholia.

Keep the bowels well cleansed.

Procure sleep; nothing is so valuable as chloral, alone or in combination with bromide of potassium; 15 to 30 grains at bed-time rarely fails to procure sleep; give this in an enema, if the patient will not swallow.

Opiates are apt to do more harm than good.

BLANDFORD, on this point, says he believes opium never does good, and may do great harm. This applies equally, whether by the mouth or hypodermically. Often, after an opium sleep, the patient quickly rouses, and all is worse than before. In melancholia, in moderate doses, it may be given with advantage.

The prolonged use of the warm bath, say at 90°, for half an hour, has acted well as a sedative. The wet pack is equally good, and is more readily applied in refractory cases.

ALFRED MEADOWS, M. D., LONDON,

Takes almost precisely the same ground. Remove all supposed sources of irritation; quiet the nervous system; support the strength. Oppose constipation with 20 or 30 grains of jalap powder and two to five grains of calomel, followed by saline aperients. RIGBY advised antimony with calomel and ipecacuanha, as too speedy to depress, and acting as a rapid purge; it acts, she falls asleep, perspires freely, and wakes greatly refreshed. As a rule, eschew opiates; they increase the irritability and favor cerebral congestion. Chloral may be given in doses of 20 to 60 grains, induces sleep without excitement or depression; henbane and chloroform are of great service. White hellebore has been recommended, and Indian hemp also. Hydrocyanic acid in doses of five minims of the dilute acid, every four hours, has been found of great value.

Vigilance must be great. Support with beef-tea, wine, etc.

PROF. FORDYCE BARKER, M. D., NEW YORK.

Bleeding is useless, even injurious, as are vascular sedatives, except where there is also a latent local inflammation. Laxatives and emetics should never be given, except when positively required.

Insomnia, a striking feature, would suggest opium, but it will not, in any doses, cut short an attack, but may be of service where there is latent pelvic peritonitis.

Allay brain excitement by restoring exhausted nerve power; improve the nutrition of the brain by easily assimilated food. Tonics are of great service, as tinct. of chloride of iron, chlorate of potassa, and the sulphate of berberina. The latter is preferable to quinine, as it has much less tendency to induce cerebral congestion.

Induce sleep. Neither opium nor bromide of potassium will, as a general rule, do this. Chloroform also has disappointed nearly all. Chloral is of immense value; it does not interfere with any of the organic functions, is not followed by any unpleasant secondary effects like opium, and never fails to produce sleep. This is prolonged for hours, and if interrupted, the patient falls asleep again without a renewal. It is best given in doses of 15 or 20 grains well diluted, and repeated every two hours till the effect is produced.

Combat all complications. Give laxatives for constipation, diuretics for deficient renal secretion. If cerebral erethism arise, shown by the flushed face and red eyes, give bromide of potassium, 20 to 30 grains every six hours; but at night, for sleep, suspend this and give chloral. Watch for local inflammations, and employ appropriate remedies.

In puerperal mania, accompanied with high fever, restlessness, head symptoms and scanty secretion of milk, *aconite* acts speedily and markedly if given soon after the chill. (PHILLIPS.

When the delirium is wild and furious, but intermittent, with scanty secretion of milk, etc., *stramonium* is useful. The nervous system is relieved, the flow of milk renewed, and sleep

restored. From a quarter to a half grain of the extract in 10 to 20 minims of the tincture may be given every three or four hours until relief is obtained. The lochia, etc., should be watched, and the patient's powers sustained by nutrition and stimulation. (PHILLIPS.)

In puerperal hypochondriasis, Sir JAS. Y. SIMPSON, after failure with many remedies, used tincture of *cimicifuga*, fifty drops a day. In eight or ten days the change for the better was marvelous, and the patient was completely restored to her former health and spirits.

Prof. BARTHOLOW also speaks of its value.

### DR. A. J. C. SKENE, N. Y.

In an article on the treatment of diseases of the reproductive organs among insane women, (*Archives of Medicine*, Feb., 1880,) this writer observes that it is based upon the general principles which guide us in ordinary practice. There are, however, circumstances peculiar to this class of patients which must, of necessity, modify our treatment.

In the management of cervical endometritis, it is necessary to use means that do not require frequent repetition. On that account the hot water douche (a most valuable remedy) cannot be used, because these patients will not permit the nurse to treat them, nor will they use it themselves, except in rare cases. There is the same objection to the use of the cotton and glycerine tampon, which requires to be renewed every day. In such cases Dr. S. has used with advantage an application of equal parts of *tinct. iodine* and *carbolic acid* once a week. This is sedative, and also changes the abnormal action of the mucous membrane, causing a diminution of the leucorrhœal discharge, the erosion of the surface disappearing, not by being replaced by cicatricial tissue, but by the restoration of normal epithelium. When improvement begins to appear it is well to lessen the proportional quantity of the acid.

Vaginitis is also a difficult disease to treat among insane women, owing to the same objections to the vaginal douche. Little progress can be made in the management of this affection without thorough cleanliness, and that is difficult to obtain among insane patients. In fact, vaginitis and vulvitis occur oftener in this class of patients than among those of sound mind, owing, apparently, to want of care in keeping the parts clean.

The treatment adopted in these cases consisted in first cleansing the membrane thoroughly with a sponge, and then applying a mild solution of nitrate of silver, or sulphate of zinc with fluid ext. of hydrastis canadensis and water, and then introducing a tampon of marine lint. This tampon is changed for a new one every two or three days, until the inflammation subsides. This is sufficient to cure most cases of vaginitis without any other treatment. It separates the inflamed surfaces, and by absorbing the secretions, keeps the parts perfectly clean. The tar which it contains is one of the most useful remedies in inflammations of mucous membranes, and, besides, fulfills a modern demand in surgery in being antiseptic. This method of treating vaginitis has been tried in general practice, and answers well, but it is among the insane where its value is most marked.

*Endometritis polyposa*, or *fungosa*, with the menorrhagia which is caused thereby, is quite a common affection among the insane. To meet the indications and the circumstances which the accompanying insanity gives rise to, he has adopted, with satisfactory results, the following method of treatment:

Having made a positive diagnosis, a small curette or scoop, having a flexible stem, is carried into the cavity of the uterus, and the whole of the fungous material broken down and removed. This simple operation is often followed by complete recovery. Sometimes the polypoid growth returns, and a repetition of the operation is necessary. In very few cases it has returned again and again, but has finally yielded to the use of *bichloride of mercury*, given in the usual doses, and the application of tincture iodine and carbolic acid after the use of the curette. There is nothing new in this method of treating the

disease in question, except in omitting dilatation of the cervix by tents as a preliminary. This is entirely unnecessary, and should be avoided, because it is painful and dangerous, while the use of the blunt scoop is less likely to give after-trouble than any other form of intra-uterine treatment. The methods of treating this affection, given in the books, are first to dilate, use the curette, and finally use some caustic or alterative application to the whole endometrium. This requires that the patient should be confined to bed several days, care being taken to prevent the development of inflammation; and with all there is danger. Such practice is impossible among the insane.

For *laceration of the cervix uteri*, the success of the operation depends to some extent upon the details of after-treatment, such as rest in bed and cleanliness. That is difficult to obtain among insane women, but in lieu of that he has employed a method of operating which gives fair results, even when the patient goes around during the healing process, to wit, the use of silk sutures and the lint tampon in place of the douche.

The advantage is that the sutures cannot wound the vagina like the ends of a silver-wire suture, and the tampon supports the uterus and guards against putting a strain upon the sutures when the patient moves or sits up. This method is well adapted to practice among the insane. A question may be raised as to the propriety of leaving a silk suture in the cervix during the time requisite for healing. The constant heat and moisture to which the suture is exposed, certainly favors decomposition of the silk, and if that should occur the suture would cause suppuration. No such results need be feared when the silk is properly prepared by immersing it for several hours in a composition of melted wax, salicylic and carbolic acids.

The *pelvic pain* or neuralgia, which arises from circatrices of the cervix and vagina, is often very annoying, and calls for treatment. Marked relief follows after dividing the bands of cicatricial tissue.

*Displacement* of the uterus, i. e., prolapsus and versions, can be treated with good results, excepting when there is anatomical

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# PUERPERAL FEVER (PUERPERAL SEPTICÆMIA, SAPRÆMIA,* PUERPERAL PYÆMIA.)

DR. R. PARK, OF GLASGOW.

In a careful study of the treatment of the post-partum fevers (*Glasgow Medical Journal*, Oct., 1880,) this practitioner states that the successful treatment of the group of pyrexial diseases hitherto known under the common term "puerperal fever," lies in—

A. The successful treatment of the initial rigor, when present, with the view specially of limiting its duration. The therapeutic means at our command for this end are the hot blanket-bath and local derivatives, hot drinks, and the hypodermic injection of pilocarpin nitrate with or without morphia and belladonna, according to the presence or absence contemporaneously of peritonitis or some other acute inflammation.

B. The limiting of reaction after the rigor and derivation of local congestion to non-vital parts; by venesection, digitalis, Niemeyer's powder, salicylic acid, quinine, cataplasms, and poultices.

C. Cleansing primæ viæ (unless contra-indicated,) palliation of vomiting, purging and pain, if present, and cleansing and disinfection of genital canal and uterus.

D. By systematic treatment adopted for the palliation of the most prominent complication present in individual cases, but most specially by reduction of hyperpyrexia, when present, and administration internally of turpentine and belladonna in large doses, more particularly where the peritoneum and uterus are inflamed.

E. Surgical means of relief and cure.

The initiatory rigor we are rarely called upon to deal with, because it is often absent or little pronounced, and when severe, it is often over before we have time to reach the bedside. Our main object in dealing with it is to "cut it short," for the longer

*Sapræmia is poisoning not by an organism multiplying in the blood, but by the chemical products of putrid decomposition passing into it.

the rigor lasts the more intense and unmanageable are the internal phlogoses likely to be, and the higher the pyrexia. Hot demulcent drinks, hot jars and bottles applied to the body and extremities and increased bed-clothing are the most accessible means. When possible, a diffusible stimulant with two or three grains of opium in gum, or Dover's powder, or still better, a hypodermic injection of morphia (one-half to one grain) should be administered at once.

Probably the best means we now have of effecting the object in view is by hypodermic injection of *pilocarpin nitrate*. By its powerful action upon the circulatory organs, the skin, and emunctories generally, it is not only likely to cut short the most severe rigor, but, in an almost miraculously short space of time to liberate the excretions of skin, salivary glands, liver and kidneys; and thus exert a derivative effect upon all internal congestions. The dose should be at least one-quarter of a grain to commence with, to be repeated in fifteen minutes, if *all* the physiological effects of the drug are not obtained by that time. *Morphia* may be injected simultaneously if localized pain has preceded or accompanies the rigor. The morphia should not be in more than a one-sixth grain dose, however.

The symptom next in importance, if not in frequency, as a source of danger, is hyperpyrexia; and it is now an established rule of treatment to control this by the application of cold in various forms; as by an ice-bag to the head, alternating with a spinal ice-bag; by sucking ice; or the application continuously of ice-cold cloths to the chest, abdomen and legs. Dr. WILTSHIRE, again, advocates dry cold, applied to the body in tin pans made for the purpose, and also in India-rubber bottles. However carried out, the method must be directed to the hyperpyrexia exclusively as a symptom, and must be carried out with firmness and determination, and accompanied by the administration of liquid food and stimulants, together with the fulfilling of any other indication which present symptoms may render necessary or obvious.

Of remedies used internally for the same end, *quinine* and Warburg's tincture stand first.

*Salicylic acid* has been recommended by several practitioners by reason of its efficacy in rheumatic fever. The writer believes that he has had good results from using salicylate of soda, combined as in this formula:

316. ℞. Sodii salicylatis, ℥ ss.
Liq. ammon. acet., ℥ iij.
Liq. morph. hydrochl., ℥ iij.
Spt. chloroformi, ℥ i.
Aq. menth. pip., ad ℥ x. M.

**A tablespoonful every four hours.**

For hyperpyrexia also, Niemeyer's antipyretic powder is second to none.

In cases where great asthenia is present *without* hyperpyrexia, where a profound alteration of the circulating fluid has taken place, rendering reaction difficult, if not impossible—and inflammatory lesions, when present, are of a languid and ill-pronounced type—an asthenia accompanied by great depression, præcordial sinking, and uncountable, feeble pulse, stimulants and opium are the remedies most to be relied upon. If good is to be got from them, they also must be used heroically and methodically. The amount of alcohol which such patients can consume without toxic effects is not less wonderful than the amount of opium which may be given to them with benefit. The spt. *terebinthinæ* has given most satisfactory results. It is certain that, when peritonitis and tympanites form prominent features, or occur independently, the spt. terebinthinæ administered in some form or combination, and given in large doses frequently, is the most invaluable medicine. The formula which Dr. P. most frequently uses, is this:

317. ℞. Spt. tereb. rect., ℥ ij
Ovi vitelli, ij.

**Mix well and add:**

Muc. gummi acaciæ, ℥ iv.
Syr. limon., ℥ ij.
Tinct. belladon., ℥ iv.
Liq. morph. hydrochl., ℥ ij.
Ess. menth. pip., ℥ j.
Aq. chloroform., ad ℥ x. M.

**A tablespoonful every three hours.**

Whenever peritonitis, either general or localized, is a prominent symptom, *belladonna* and *opium* are the most reliable agents with which to deal with it. Opium has been long known to exert a powerful influence over peritonitis, but somehow it would appear as if the knowledge had not been properly appreciated or acted upon. In order to get benefit from its use in acute and dangerous cases, it must be given in doses sufficient to *produce and maintain narcotism.* Unless this is done, temporary benefit only will ensue. The fear of narcosis may practically, *in dealing with these cases*, be dismissed from the mind. There is no necessity to produce too *profound* narcosis, and so create alarm needlessly; but it is absolutely necessary to maintain a *prolonged* narcosis, once it is induced. Dr. P. has repeatedly injected subcutaneously as much as three grains of morphia hydrochlorate (*Glas. Med. Journal*, July, 1876,) in cases of post-partum peritonitis, without inducing even moderate narcosis, but with marked and immediate relief to harassing pain. Experience teaches that, having promptly subdued pain and distress by injection of a sufficient dose of morphia subcutaneously, the anodyne influence (and stimulant and sustaining powers) of the drug should be maintained by repeated small injections, or by its administration in combinations, by the mouth or rectum.

The usual effects, when thus given, are disposition to sleep, but not profoundly, contracted pupil (not always, nor even generally, *when hypodermically administered*,) perspiration, often profuse, sometimes a red, blotchy eruption, (?) diminished frequency of respiration, subsidence of pain and tenderness, slight suffusion of eyes, and, after a time, reduced pulse. The ease with which a patient can be roused from sleep *when a dose is due*, and the state of the respiration, are the guides as to whether the dose should be given or not. If the latter be reduced to twelve in the minute, or should be very irregular, or sighing, the dose should be diminished or withheld. The respiratory function gives the most certain and reliable indication of where danger is present.

*Belladonna*, as a remedy for peritonitis, whether idiopathic or

post-partum is of more recent date; but recent experience leads to the belief that it is even more specific than opium, when used systematically and in what is considered large doses. When given alone, it is necessary, as in case of opium, to induce and maintain its physiological effects; and when given in combination, it is best given so that its effects shall rise superior to those of the agent with which it is combined. Thus, in prescribing it with opium, one of the most effective forms in which it can be given is with Dover's powder, as thus:

318. ℞. Extract belladonnæ, gr. xij.
Pulv. ipecac. comp., gr xlviij. M
Make twelve pills. One every second hour.

The physiological effects of the belladonna are fully produced after the third or fourth dose, when the interval between the doses may be lengthened.

The delirium and indistinct vision are the guides. After their production they should be maintained till such time as the more urgent symptoms of the fever have passed away.

For the relief of the pain of peritonitis, poultices have been prescribed as a routine. This is a practice, however, which, the writer feels is highly dangerous and cannot be too severely deprecated, as, if the pain be due to an incipient peritonitis, it is amazing with what rapidity it spreads under the fostering warmth of a hot poultice. Care must therefore be taken to make as accurate a diagnosis as possible of the *cause* of the pain; but, at all events, to make sure it is *not* due to an incipient peritonitis. In cases where it can reasonably be construed to be due to any other cause, as, *e. g.*, painful and partial uterine contractions, retention of lochia and clots, cellulitis, metritis, etc., poultices will at once contribute to the relief of the pain as a symptom, and, in some instances, to the removal of the cause by resolution or suppuration, etc. And, again, in cases of completely developed peritonitis, light and often-changed poultices are of infinite value for the soothing of pain and promotion of resolution under systemic treatment.

What has just been written regarding poultices might be repeated with regard to leeching. In cases of peritonitis, unless in the rare case where an adhesion has already formed, leeching only increases the inflamed area and the rapidity of extension, at the same time that it lowers the vires vitæ When abstraction of blood can be borne, as has been previously stated, it is best done by venesection, and a rapid withdrawal of sufficient to affect the pulse—the effect being maintained afterwards by suitable medicines, as, *e. g.*, digitalis alone, or in combination, as in Niemeyer's powder.

The induction or restoration of the *lacteal secretion* is frequently an object which the physician is desirous to attain, as much for the sake of the reflex action so obtained thereby on the womb as for other reasons. The hypodermic injection of *pilocarpin nitrate* is likely to prove a valuable means to this end; and where there is hardness and congestion, with tenderness of the mammæ, friction with vaseline is at once an elegant and efficient adjuvant to other means in more ordinary use.

When a zymotic or cadaveric etiology is clearly made out, or even when there is a *prima facie* case in favor of it, the infant should be withheld from the breast; in other cases the infant may more properly be put to the breast, always provided that the patient herself desires it, and it does not fatigue her. Under these circumstances the infant derives no harm, and the mother benefits from the rousing of her sympathetic system into more perfect action as well as from a fuller and speedier establishment of the lacteal secretion. When, however, great asthenia is present, or a fatal termination seems imminent, the fatigue of endeavoring to suckle her infant might only hasten collapse, and other means should be adopted for soliciting or maintaining the secretion.

In cases where it is suspected that there are in the womb either an adherent shred of placenta, fœtid membranes, a decomposing clot, or vitiated lochia, the very first and foremost thing to be done is to explore the interior of that organ and remove the contents. The most satisfactory way of doing this is to pass

the previously anointed hand into the womb, and carefully remove therefrom any solid cause of offence; and at the same time, and before removing the hand, to have the interior well syringed with a disinfectant solution. The womb may be explored in this way as late as three weeks post-partum.

Uterine cheiroscopy, however, is such a very uninviting proceeding, and so obnoxious to the patient under the circumstances (post-partum) that it is never likely to become a routine practice, even in presence of febrile symptoms. As a general rule syringing will be resorted to, not only as a prophylactic, but as a curative measure.

Tympanites is a symptom which frequently calls for separate treatment. It is most frequently present as the result of a paralyzed condition of the bowels in general peritonitis, but it may occur in the course of any post-partum fever independently of peritonitis. The turpentine mixture, of which a formula is given above, is the best remedy so far as drugs are concerned. It may be fitly administered as an enema likewise.

Puncture of the colon in the right iliac fossa seems to be the only treatment which is effectual, as it is also the best. It is necessary that the aspirating needle should not be of too small a diameter, else the result may be disappointing, a fresh gaseous secretion or formation taking place as fast or faster than escape takes place. It is well also to have a broad bandage passed round the body before the needle is introduced, so that pressure may be brought to bear on the tympanitic abdomen, for atmospheric pressure does not seem to be sufficient in some cases to overcome the inertia of the intestinal and abdominal walls. As it has been proved over and over again, to be quite a safe operation, no one should rest satisfied until the distension is relieved.

Gastro-bilious symptoms are sometimes so prominent a feature of post partum fever that they have given rise to the erection of a distinct type, termed the gastro-bilious (puerperal intestinal irritation of Locock.) When the symptoms supervene early, the indications are promptly to aid the efforts of nature by exhibition of smart stimulating emetics or cathartics, followed by

demulcents, and then derivatives and sedatives. The hypodermic injection of *pilocarpin*, accompanied by administration of bismuth and hydrocyanic acid and morphia, will probably fulfill the latter indications better than any other method that can be thought of. Hot applications to the surface will a be suitable adjuvant, with the addition of capsicum or mustard cataplasms over the stomach if relief is not obtained by these means in the course of a couple of hours. Then, as soon as the chylopoietic tract is in repose, the mist. tereb. c. belladonna should be administered.

*Hydrosis* was the title given by RAMSBOTHAM to what he considered a distinct form of post-partum fever. It is regarded by LEISHMAN as a symptom only. Certainly it is *the* symptom in many cases; but, except for the adynamia with which it is accompanied, it does not call for very special treatment. The turpentine and belladonna treatment is peculiarly applicable, as the one stimulates whilst the latter modifies the excessive sweating. The adynamia must also be relieved additionally by specially devised nourishing soups and enemata, and the administration of wines rich in tannin.

### PROF. J. MATTHEWS DUNCAN, M. D.

This distinguished teacher states that during the currency of puerperal septicæmia or poisoning there is the possibility of a cure, almost sudden, by removing the fœtor or stopping the supply of the poison. Nothing is more striking or more gratifying in the whole practice of medicine than this sudden recovery. A patient in the most alarming condition, apparently within a few hours of death, is appropriately treated, and within a few hours alarm has entirely subsided. It is not in lying-in women alone that such cases are seen; but sapræmia is more frequently observed in them than in others.

Sapræmia is treated earnestly, even heroically if necessary, with a view to its own cure, and with a view to the prevention of the complications, inflammatory, septicæmic, or pyæmic,

which it is very likely to bring in its train. Heroic treatment may be required to reach the remotest part of the genital tract in search for decomposing matter, or to ascertain that there is nothing but putrid lochia in the case. Mere vaginal washing may suffice, or intra uterine washing, or the volsella may be passed into the uterus to grope for the decomposing structure, or with the same view a finger or fingers may be passed, or even the whole hand; and it may be necessary to dilate the cervix preliminarily. Most of this may be done without an anæsthetic, but where the hand is to be introduced into the vagina, the previous induction of anæsthesia is desirable.

The lotion which Dr. DUNCAN always uses is the *carbolic*, of the strength of 1 in 40, or occasionally 1 in 30. It is used tepid or warm. In conducting the operation it is necessary to be very gentle, to avoid the introduction of air into the passages, and to see that the fluid runs out freely. If the os uteri externum and internum are not widely open, a pipe with double current should be used. The whole proceeding should cause little or no pain, and, for an ordinary washing, a pint or a pint and a half may be passed. But if the discharges are copious and fœtid, more may be required, and the rule is to continue the injection so long as it comes away foul or perceptibly fœtid. Of course, a bowl is to be so used as to receive all the lotion as it is discharged, in order to save the bed linen from being wetted. When the uterus is washed out the medical attendant conducts the operation, but vaginal washings may be left to the nurse. The washings are to be repeated from twice to four times a day if the fœtor persists in the discharges. After the fœtor is suppressed, twice a day is sufficient. If the discharges become natural, and if the symptoms of sapræmia disappear, the washings are stopped. In any case they are required only for a few days.

Ice is useful to allay thirst, and also for the nausea and vomiting, which is a common symptom of peritonitis. For the excessive and painful flatulence often present *charcoal* in teaspoonful doses may be given in water once or twice daily; or *turpentine*, in ten-drop doses, three or four times a day in any appropriate

vehicle. *Opium* may be almost always given with advantage. With all these the great points remain of good nursing, careful feeding and prudent stimulation.

JAS. G. GLOVER, M. D., LONDON,

In the *Lancet*, Feb. 1st, 1878, includes under the term "puerperal pyrexia," all cases of high temperature not associated with obvious external inflammation, as in the breast, or with obvious infection from the common infectious diseases. Presumably the local leison is uterine or peri-uterine, for there is almost always more or less pain in and tenderness over some part of the uterus, with a good deal of abdominal distention. There is also generally a quick pulse, and the thermometer, which is an invaluable guide in such cases, shows a high temperature. In no case has he seen suppuration, and the patient has got well gradually.

He sums up the treatment: First, a dose of quinine and iron every three or four hours. The following is a good form in which to give these:

| | | | | |
|---|---|---|---|---|
| 319. ℞. | Quiniæ sulphatis, | | gr. ij. | |
| | Ferri chlor. tinct., | | | |
| | Sp. chloroformi, | āā | ♏x. | |
| | Syrupi simp., | | f.℥ss. | |
| | Aquæ destil., | | f.℥j. | M. |

For one dose.

Secondly, a dose of opium every three, four, six, or eight hours, according to the pain, without ipecacuanha, which may set up sickness, and without calomel, which may set up unnecessary irritation of the bowels. The dose of opium, say half a grain, is best given in a small pill. Thirdly, a large linseed or bran poultice over the stomach, repeated every three or four hours. A little laudanum in it often adds much to its soothing effect. Fourthly, and specially, vaginal injections, at least twice a day, of warm water with a little Condy's fluid in it. The diet should consist of good beef-tea or chicken-broth, with generally a small regulated allowance of brandy, a dessertspoonful every

three or four hours. Sometimes the brandy is best given with arrow-root.

### HUGH MILLER, M. D., OF GLASGOW.

*Excessive and Septic Lochial Discharge.* This teacher, in a clinical lecture, reported in the *Edinburgh Medical Journal*, Nov., 1878, recommends the following prescription in cases in which there is an excessive discharge, accompanied by a relaxed condition of the uterus. He administers one drachm doses of liquid extract of ergot, repeated every three or four hours, and

320. ℞. Quiniæ sulph., ℥ ss.
Acidi hydrobromici, ℥ vj.
Aquam, ad ℥ ij. M.
Dose, teaspoonful in water three times a day.

By this method large doses of quinine may be given without causing headache.

In septic cases Dr. MILLER advises the employment of *sulphocarbolate of potassa*, in the form of powders, in doses of 10 to 15 grains internally three times a day. When the discharge is suspended, the treatment consists of turpentine stupes applied over the lower part of the abdomen, with the addition of warm moist cloths, or of sponges pressed out of hot water, and applied to the external parts. In special cases, which require an antiseptic plan of treatment, Dr. MILLER makes use of a solution of *thymol*, 1 part to 500 parts of water, or, better, three grains of thymol to an ounce of eau de cologne. This mixture, which has a pleasant and rather refreshing odor, is simply sprinkled over the napkins before they are used. In severe cases, with a putrid odor, a solution of *permanganate of potassa*, injected with Higginson's syringe, provided with a vaginal portion, is made use of; the injection of the fluid is continued till it returns unaltered in color. In all cases where the discharge is excessive, tincture of *arnica* is employed; the tincture is used in the proportion of one tea-

spoonful to a cupful of water; it acts as a mild astringent and disinfectant.

### PROF. FORDYCE BARKER, M. D., NEW YORK.

This author has an exalted opinion of *veratrum viride* in this disease. He however recommends small doses, and the effects to be carefully watched. If the remedy produces symptoms of depression, these symptoms have been readily dissipated by brandy, whiskey, or carbonate of ammonium. The veratrum viride should not be discontinued too early, as its premature withdrawal may be attended with renewal of the symptoms. He usually commences by giving five drops every hour, and gradually increasing the dose, if there be not a perceptible impression upon the pulse after giving two or three doses. After the pulse is reduced, it is thus maintained by administering two, three or four drops every second hour.

It is also very important in this disease to allay pain, quiet nervous irritation, and secure sleep. These ends are best secured by opiates. He prefers Magendie's solution of morphia by the mouth, if the stomach is not irritable, but hypodermically, if there be nausea and vomiting.

The next indication is to reduce fever. Quinine, mineral acids, cold sponging, alcohol, and appropriate nutrition, are the antipyretics upon which the medical profession now relies. Of the mineral acids, our author prefers phosphoric acid. He believes that it allays *nervous* irritability and that it acts specifically as a tonic. He adds a teaspoonful of the dilute acid to a tumblerful of water, flavored with the syrup of orange peel. If the patient be disinclined to drink, he has sometimes substituted ten to fifteen drops of dilute sulphuric acid every two or three hours. The treatment of pyæmia must be governed to a great extent by the therapeutical indications of its associated diseases. Prof. B. regards quinine and alcohol as the two great remedies in the constitutional treatment of this disease. He prescribes 10 to 15 grains of quinine in the morning, and

from 15 to 20 at night. If from idiosyncrasy there is an intolerance of this agent, he combines it with from 10 to 15 grains of the bromide of potassium. This counteracts the unpleasant cerebral symptoms which sometimes occur. He has never seen quinine produce paralysis of the motor power of the heart. He thinks a free use of stimulants obviates this danger. These he pushes to a degree of tolerance. To procure rest he advises an opiate at bed-time. Food the most nourishing and the most easily digested should be urged upon the patient, and skill should be used to make it tempting and palatable. If the urine become scanty, bloody and albuminous, he orders dry cups over the kidneys, the free use of diluent drinks, and the tincture of the chloride of iron. The latter is very useful in conjunction with the chlorate of potassium when there are very profuse discharges of pus from external abscesses. He esteems the following combination:

| | | | | |
|---|---|---|---|---|
| 321. ℞. | Tinct. ferri chloridi, | | f.℥ ss. | |
| | Aquæ puræ, | | f.℥ ijss. | |
| | Potassii chloratis, | | ℥ ss. | |
| | Syr. aurant cort., | | | |
| | Glycerini puri, | āā | f.℥ ij. | M. |

Sig.—Tablespoonful in a wineglassful of sugar and water four times a day.

## PROF. W. S. PLAYFAIR, M. D., LONDON.

Regards the indications: to discover, if possible, the poison, in the hope of arresting further septic absorption; to keep the patient alive until the effect of the poison has worn off; and to treat any local complications that may arise. Antiseptic injections must be employed at least twice a day. He employs Higginson's syringe, with a long vaginal pipe attached. He prefers the alternate use of Condy's fluid largely diluted, and the tincture of iodine. The washing should be thorough, and by the physician himself. Food and stimulants to keep up the powers. Not more than one or two hours to elapse without nutriment of some kind. In moderate cases a tablespoonful of brandy or whiskey every four hours; but when the pulse is rapid and thready, there

is low delirium, tympanites or sweating, indicating great exhaustion, give them in larger quantities and at shorter intervals. In severe cases, 8 to 12 ounces, or even more, may be given in twenty-four hours, with benefit. Never bleed.

Give medicines to lessen the force of the circulation, without exhausting, and to diminish the temperature. Tinc. of *aconite* is most valuable. Give a single drop every half-hour, increasing the interval according to the effect. Generally, after four or five doses, the pulse falls, and then a few doses every two hours will suffice. Watch it, and stop if the pulse becomes too weak, or intermits.

To reduce the temperature, give *quinine*, 10 to 20 grains, morning and evening. The head, and other unpleasant symptoms, may be lessened by the addition of 10 to 15 minims of hydrobromic acid to each dose. *Salicylic* acid, ten to twenty grains, or the *salicylate of soda* in the same dose, is a valuable antipyretic. It requires to be watched.

Warburg's tincture, the basis of which is quinine, has a powerful antipyretic effect.

Cold may be applied in suitable cases. The ice-cap is best; it comforts, relieves the throbbing headache, and the temperature usually falls. When the temperature reaches 105°, cold to the body may be used, but only as a temporary expedient.

Where there is much tympanites, *turpentine*, 15 to 20 minims, may be given in mucilage. It acts as a strong nervine stimulant.

Purgatives are doubtful, and often exhausting.

ALFRED MEADOWS, M. D., LONDON.

Quiet the system by opiates in the early stages, moderately excite the bowels by a saline, stimulate the skin by small doses of *carbonate of ammonia* or other stimulating diaphoretics. Local applications, poultices to the abdomen to keep the part warm and moist, will be of service, and opium may be added to these.

When the reactive phenomena of inflammation are well marked, leeches may be applied over the abdomen, from six to twelve, as may be demanded.

Venesection, when needed, must be *plena rivo*, thus producing the effect at once, and with less loss. Next, nauseating doses of *tartar emetic* to lower the force of the heart's action; and if the pulse again becomes hard and full, repeat the bleeding till the disease is subdued. *Calomel* and *opium* freely, in order that the system may be brought quickly under the mercurial. *Mercurial* frictions may be used. *Turpentine* has been successfully given in half-ounce doses, two or three times a day, especially in tympanites.

The uterus should be well disinfected by warm water and carbolic acid, or Condy's fluid. If there be much pain, give Dover's powder frequently, and keep up the strength.

His own plan is to support, by a moderate use of stimulants, a hot, dry skin being a contra-indication; warm emollients to the vagina and to the abdomen; cleanliness in the atmosphere, the clothes and the uterus. The diffusible stimulants, opiates, salines, diaphoretics, and vegetable tonics, when the acute symptoms are gone, are the drugs to be preferred. With a high temperature, pulse quick, hard and full, skin hot and dry, nothing can compare with *aconite*, one drop every hour.

WALTER IZARD, M. D., LIBERTY, VA.,

In the *Va. Med. Monthly*, Aug., 1878, regards the cause to be the retention and absorption of excrementitious and morbific matter. Hence he strikes at the root by employing, not intra-vaginal washes, but intra-uterine. He employ a double catheter similar to that in common use for washing out the bladder, only with a larger and more gradual curve, and a slight prolongation of two tubular orifices through which the injected fluid makes its entrance and exit; the exit tube should be several sizes larger than the other. It may be made of gutta percha or silver; two pieces of rubber tubing, two and a half to three feet long, should

then be fitted to the tubular orifices; to that of entrance, a large glass funnel should be attached.

Everything being prepared, and the patient occupying the dorsal decubitus, with the lower extremities flexed, and the body having been placed near the edge of the bed by assistants, the left index-finger, well oiled, should be placed in contact with the external *os uteri;* then the catheter, passed along this finger as a guide, should be passed to the fundus uteri—meeting in this condition no resistance at the internal *os.* Then the fluid having been poured into the funnel, it should be raised to the height of two feet above the bed, and the fluid allowed to flow into the uterus, the only force used being hydrostatic pressure. The fluid will be found to return almost immediately through the waste tube, so changed in appearance as to leave no doubt as to whether it has come in contact with the internal uterine walls or not. This funnel arrangement is the one calculated to accomplish the desired end with the least possible amount of injurious force. By the Davidson's or any other pump syringe, the fluid is thrown in with such force as almost to render its escape through the fallopian tubes a certainty.

The washing out of the uterine cavity should cause no pain, although slight uneasiness is sometimes complained of by patients during the introduction of the instrument. The fluids used for washing out the uterine cavity have been several—preferably potassæ permanganate (grs. vijss. to Oj. of tepid water,) or carbolic acid( 3 j. to Oj. of water) and a weak solution of salicylate of soda in glycerine and water.

### JOSEPH HOLT, M. D., OF NEW ORLEANS.

In reviewing the subject this writer says (*New Orleans Medical Journal*, Sept., 1876,) that the physician's first duty is to guard every obstetric patient against septic contamination from without, by refraining from attending such cases if we have reason to believe that our hands or clothing are infected; by the

liberal use of disinfectants about the apartment or premises, and even removing the patient if we suspect the unhealthiness of the locality.

We are to guard against auto-infection by cleanliness, by the free use of vaginal injections when there is even the slightest putridity of the lochia, by the immediate removal of any remnant of decomposing placenta or coagula, by the avoidance of anything likely to check the lochial discharge, as cold and dampness, and when it is checked, inviting it again by the repeated warm douche. As a disinfecting wash, he earnestly recommends the formula of Dr. I. L. CRAWCOUR, of New Orleans:

| | | | |
|---|---|---|---|
| 322. ℞. | Acidi carbolici, | ℥ j. | |
| | Tincturæ iodinii compositæ, | f. ℥ ss. | |
| | Glycerinæ, | f. ℥ ijss. | M. |

SIG.—A tablespoonful to be stirred into a quart of tepid water, and injected high up in the vagina two or three times daily, as the case may require.

If infection has already occurred, we are to look to antiseptic remedies as offering the most reasonable hope of success. If puerperal fever is septicæmia, it is irrational to expect a positive controlling influence from opium or calomel, purgatives, emetics, venesection, cardiac sedatives, or any other remedy not having the quality of directly disinfecting the blood.

There is no doubt but that some of these drugs and expedients are extremely useful in the treatment of this disease, but as a mainstay, experience has taught that none of them are to be relied upon. He has administered, with an apparent speedy amelioration of symptoms, the following formula:

| | | | |
|---|---|---|---|
| 323. ℞. | Acidi carbolici, | gtt. xx. | |
| | Sodii sulpho-carbolatis, | ℥ ss. | |
| | Glycerinæ, | f. ℥ j. | |
| | Aquæ, | f. ℥ v. | M. |

SIG.—Tablespoonful every three hours

The old remedies, approved by experience, are called for when specially indicated; as in many cases keeping the bowels freely open by mercurial purgatives, the pill of calomel and compound extract of colocynth, subduing excessive heart-action with veratrum viride, blistering when the inflammation localizes itself, and attending to the state of the lochial discharge.

In cases where the local inflammation is attended with excruciating pain (of such common occurrence,) he has been able to control it perfectly by applying over the suffering part a fly-blister, removing the cuticle, and then laying on a plaster composed as follows:

| | | | | |
|---|---|---|---|---|
| 324. ℞. | Ex. belladonnæ, | | | |
| | Ex. opii, | āā | ʒj. | |
| | Adipis, | | ℥j. | M. |

For a plaster.

The effect of this plaster is so tranquilizing as to do away with the necessity of narcotics given internally. The physician must carefully watch its effect, and remove it for a while if much narcotism is induced, protecting the blistered surface in the meantime with an emollient poultice. The strength of it may be increased or diminished according to the effect, and it may be continued as long as there is abdominal tenderness.

### PROF. CARL RICHTER, M. D., OF BERLIN.

The treatment of puerperal disease pursued by this writer (*Zeitschrift für Gyn.*, 1877,) may be briefly stated, as follows: As soon as the lochia became offensive or arrested, or offensive placental *débris* or coagula were discharged, or the temperature or pulse rose, or any inflammatory reaction in the genital tract appeared, or the uterine regions and surroundings became sensitive, or the broad ligaments appeared swollen—at once the uterine cavity and vagina were thoroughly washed out, first with a three per cent., then with a two per cent. carbolic solution, two or three times a day; the permanent ice-bladder was applied,

preceded, if indicated, by leeches; and, according to the severity of the symptoms, first salicylate of soda in doses of gr. xv.–xxx. several times a day. The ice was continued so long as sensitiveness remained; the irrigations and soda salicylic, until pulse and temperature were reduced to the normal.

It should be mentioned that a combination of sulphate of quiniæ (gr. viij.,) with soda salicylate (gr. xv.–xxx.,) could be relied upon with tolerable certainty, although but temporarily, to reduce the high temperature, without causing salicylic intoxication; a ten per cent. solution of carbolic acid was very useful as a local application to wounds of the parts.

W. H. PARISH, M. D., PHILADELPHIA,

In a paper read before the Philadelphia Co. Med. Soc., being a clinical study of the cases at the Philadelphia Hospital, concludes as follows:

Puerperal fever and puerperal septicæmia are dependent upon one and the same poison, and this poison originates in a great variety of forms of decomposing organic material. The source of the poison may be within the woman herself, or it may have its origin in sources external to her.

Puerperal fever or puerperal septicæmia may be conveyed from one puerperal patient to another.

If a lying-in patient is suffering with traumatic inflammation, she is thereby rendered more liable to internal infection.

The poison develops with great rapidity in a lying-in patient suffering with traumatic inflammation, and from her it may be transferred to other lying-in patients, and in them it may produce septicæmia or puerperal fever, though the original patient may herself have escaped infection.

In a patient suffering with auto-genetic infection, the symptoms vary greatly, according to the absence or presence and degree of traumatism, and according to the special mode of the internal infection.

The symptoms in patients suffering from external infection are

*Ergota* is considered by F. BENOIST to be an efficient agent against putrid infection.

*Ferri Chloridi Tinctura.* Dr. CHARLES BELL, in describing some cases of puerperal fever in the *Edinburg Medical Journal*, July, 1880, says of its treatment: "I have found no remedy so effectual in purifying the system as the Edinburgh preparation of the tincture of the muriate of iron when given regularly in full doses frequently repeated. The great error in the employment of this medicine is the timidity shown in giving it in sufficient doses; in consequence its good effects have been questioned in the diseases of a zymotic character, such as erysipelas, diphtheria, and scarlet fever. It has remarkable effect in moderating the pulse and diminishing the secretion of pus. At the same time, I think it right to warn the practitioner against trusting to the new preparation of iron called the tinctura ferri perchloridi, which differs from the tincture ferri muriatis in its formation, its medicinal effects, and in its analysis." The dose he gives is 30 drops every two hours, well diluted.

*Ferri Subsulphas* is an antiseptic agent of value, as well as a hæmostatic. Dr. A. P. C. WILSON, of Baltimore, recommends that it be combined with glycerine when used in the uterine cavity.

*Hydrargyrum.* The mercurial treatment still has defenders in England, (see p. 453,) but is nearly obsolete elsewhere. Calomel in small doses is given until salivation is produced.

*Iodinium.* Dr. E. J. TILT believes that tincture of iodine is the best disinfectant for uterine injections. He uses as an injection after labor, four drachms of the tincture in half a pint of tepid water. He speaks very highly of the results of the practice of Dr. DUPIERRIS, of Cuba, who had great success in preventing and curing puerperal fever by injecting into the womb, immediately after removing the placenta, the following:

326. ℞. Tincturæ iodinii, f.℥iv.
Potassii iodidi, gr. x.
Aquæ destillatæ, f.℥j. M.
For one intra-uterine injection.

*Chloral Hydras.* Dr. J. A. LARRABEE, of Louisville, has found a solution of chloral of mild strength, gr. x.–f. ʒj., much more efficacious in checking an epidemic of puerperal fever than carbolic acid or anything else. (*Half-Yearly Compendium*, July, 1878.) He states that in all labors there is an odor to the lochia, plainly discernible at the end of the first twenty-four hours. If this condition remains uncorrected, and the nurse neglects to attend to her duties, there is great danger of septic-poisoning. A solution of chloral of mild strength, in water, and by means of the douche or fountain syringe, removes at once not only the odor, but destroys the noxious influence of such poison. Carbolic acid, although it has been much lauded, is, in his judgment, entirely unreliable, and merely substitutes its own odor for that of the disease.

*Digitalis* has been employed by Dr. WINCKEL as an abortive of puerperal fever. It reduces temperature, and produces rest and sleep. (Ranking's *Abstract*, vol. XXXVI.) He uses the following formula for hypodermic injection:

325. ℞. Digitalini .001 gramme.
Alcoholis,
Aquæ, ää ad 3. "

In true septic fever it is useless, and AMANN warns against the large doses administered by some practitioners.

*Collodion.* For the prevention of puerperal diseases, BENOIST attributes great efficiency to the application of collodion over the abdomen to overcome inflammatory affections.

*Eucalyptus.* According to HERTZ the tincture of eucalyptus is next in efficiency to quinine, and should always be tried when the latter fails. The effect is prompt, and there are no unpleasant after-effects. Two or three teaspoonfuls of a tincture of the fresh leaves is the dose he recommends. OSTERLOH, of Dresden, has also testified to the value of this drug, especially where febrile symptoms appear without marked local disturbance.

has lately been asserted to be a very valuable remedy in puerperal septicæmia. Cases are given by Dr. A. BAIRD, Edinburgh. (*Med. Jour.*, August, 1879.) BARTHOLOW speaks of the undoubted good effects of quinia in doses of gr. v.–xx., every four hours. Dr. R. PARK (*Glasgow Med. Jour.*, October, 1880,) has given as much as 5j. at once, with no other effect than intensifying the sufferings of the patient.

*Salicin*, internally, has been used by DUNCAN and others, and is spoken of as a reliable antipyretic.

*Salicylicum Acidum* has been used both locally and internally.

*Sodii Benzoas* has been introduced comparatively recently by Prof. KLEBS, of Prague. It is said to be useful in every kind of septic injection. The dose is 3 ij.–iv. in solution, repeated as needed. A few cases have been reported in which its administration seemed to do good, but they have not been sufficiently numerous to be decisive as to its merits.

*Sodii Salicylas*, as more agreeable than the acid, should be preferred for internal use.

*Sulphurosum Acidum*, for injection and irrigation, has been advocated.

*Terebinthinæ Oleum* is said, by various writers, to have decided clinical experience in its favor. It has been found of advantage applied both externally and internally. Dr. COPEMAN gave f. 3j. thrice daily. (*Med. Times and Gazette*, 1872.) HOGG, of Scotland, as much as f. 3ij. at a dose, in whiskey punch, in desperate cases. It may also be thrown up the rectum, or applied to the surface of the abdomen. For the latter purpose *turpentine-flannel* is available. A piece of flannel is taken large enough to cover the whole abdomen; it is dipped in hot water and wrung out dry, then sprinkled with turpentine and laid, while as hot as possible, on the skin, and covered with dry cloths and wash-leather. This is repeated until the skin becomes decidedly red.

*Thymol* has been employed as an antiseptic by Dr. MILLER.

*Veratrum Viride* has its defenders as a valuable means to control arterial action. But the present tendency is to distrust this drug.

## GENERAL MEASURES.

***Blisters*** are often of great service, especially in the later days of the fever, when DUNCAN recommends "a large fly-blister of the old-fashioned sort, so as to produce great irritation and a copious effusion of serum."

***Leeches.*** Prof. DUNCAN observes that in milder cases where there is parametritis or perimetritis as many as a dozen leeches, applied above the groins, generally cause marked relief of pain and some improvement of the general condition.

***Intra-Uterine Injections.*** These have been fully discussed on previous pages. There is no doubt they are most beneficial in many instances of this disease. Weak carbolic acid solutions appear to be the best. Salicylic acid produces a roughness of the mucous membrane, and permanganate of potash stains the linen. In introducing the catheter great care should be taken not to wound the inflamed lining of the uterine cavity. It is well to close the genital fissure for a few seconds, so as to retain the injection longer.

***Cold.*** An important measure is the application of cold. It may be employed as lukewarm, cool or cold baths, ice-bags, or cloths wet with cold water. These are to be chosen with reference to the height of the fever and the strength of the patient. In light cases cold cloths or ice-bags to the head may be sufficient; in severer ones, the cloths should be applied to the abdomen or the whole body. The latter, however, is not convenient in parturients. Cool baths are very efficient, but by no means easy to carry out in private practice.

***Purgatives.*** SEYFERT, of Prague, was so convinced of the good effects of purgatives in these fevers that he administered large doses of cathartic waters in all cases, and laid down the maxim, "Puerperal fevers are only curable by a diarrhœa," either spontaneous or artificially produced. Prof. AMANN (*Klinik der Wochenbettkrankheiten*, § 148,) who quotes this opinion with some approval, prefers *calomel* to all other purgatives. He gives gr. v. every two hours until the bowels act freely; or in light cases, castor oil in coffee. These

are the only two purgatives he considers proper in such cases.

*Venesection* is less used than formerly. As the disease is one of an asthenic character, the cases in which loss of blood is desirable must be very rare and exceptional in number.

# PUERPERAL THROMBOSIS AND EMBOLISM.

PROF. W. S. SPLAYFAIR, M. D., LONDON.

When there are evidences of pulmonary obstructions generally, the fatal results follow so speedily that no time is given to do anything. Keep the patient alive by stimulants, brandy, ether, ammonia. Possibly leeches or dry cups to the chest might aid in relieving the circulation. Enjoin the most absolute and complete repose, with the hope that the vital functions may be continued until the coagulum is absorbed or lessened, so as to permit the passage of the blood. Death often follows the most trivial exertion, such as rising out of bed. Feed the patient with abundant fluid food, milk, strong soups, and the like.

RICHARDSON suggested ammonia. He has since advised liquor ammonia in large doses, 20 minims every hour, in the nope of causing solution of the deposited fibrine, and says he has seen good results of it. Others urge the use of alkalies to favor absorption. The best that can be said of them is, that they are not likely to do much harm.

Where there is evidence of obstruction in a limb or other point, nothing can be done. Rest absolute, generous diet, and sedatives for pain, is all. In case of gangrene of an extremity, amputation above the line of demarkation may save the life of the patient.

## THROMBUS.

PROF. F. WINCKEL, M. D., DRESDEN.

If the vagina be the location, plug with cotton-wool or with a colpeurynter filled with ice-water. Cold to the tumor, if in the labia, and ice, digitalis and opium internally, the latter to allay excitement and pain. When it ceases to enlarge, use absorbents. Do not open, unless a special indication to that effect exists.

Employ ice compresses, cloths soaked in warm lead-water and opium, 4 drachms tinctura opii to one pound of lead-water, infusion of chamomile flowers, arnica, etc.

If the tumor does not decrease, the pain is intense, and the skin gets darker, open, turn out the clots, and if the bleeding continues, fill the cavity with charpie soaked in solution of tannin, or, better, a three per cent. solution of carbolate of soda; lay a compress over it, and secure with a T bandage. It is best to wait, if possible, until the hemorrhage has ceased, before opening the tumor. General indications will be to support the system, and give quinine and acids.

Vaginal thrombus usually arises immediately during or after child-birth, and is formed in the loose tissue between the vagina and rectum, whence, however, it sometimes extends to the gluteal regions, and even to the thighs and psoas muscles. The treatment as recommended by Dr. KUBKER (*Wiener Medicin. Wochenschrift*, No. 52, 1878,) consists in the prompt application of cold, as ice and ice-water, and compression. As soon as the thrombus ceases to extend, poultices are indicated.

PROF. FORDYCE BARKER, M. D., NEW YORK.

If the thrombal tumor be not so large as to cause great pain by its pressure on the adjacent tissues, or to interfere materially with the delivery, or if laceration and escape of blood almost immediately follow the development of the tumor, apply the forceps and deliver at once. Arrest the flow of blood which usually occurs at the moment of the delivery of the head, with compresses of cotton batting saturated with a solution of the subsulphate of iron. As soon as this hemorrhage is controlled, deliver the placenta. He opposes the use of the tampon, on the ground that it retains the lochial discharge, and exposes the patient to septic poisoning.

To the laceration he applies a lotion of carbolic acid and

glycerine, not only as an antiseptic, but as a means of protecting the part from excoriation by the irritating discharges of the urine and the lochia. Avoid disturbing the coagulum formed by the subsulphate of iron, so as to avoid secondary hemorrhage. As a precaution against this accident, the bladder should be evacuated for several days by a catheter.

When the tumor has attained such a size as to offer a mechanical obstacle to delivery, incise at once, remove all clots that have been formed, and then deliver by the forceps. The longer the incision is postponed, the greater will be the amount of extravasation, the greater the distention of the parts, and the more extensive the laceration of the areolar tissue.

If the laceration does not appear until after delivery, incision should not be made so long as the tumor is increasing in size. He advises that the physician should wait until after the coagulum is formed, which arrests the hemorrhage by pressure on the lacerated vessels.

## DR. JOSEPH AMANN, OF MUNICH.

*Hæmatoma.* Little or nothing can be done to guard against a hæmatoma. As soon as one appears, it is the duty of the physician to limit it as much as possible. This is best done by introducing a coutchouc tampon filled with ice; or by filling the vagina with carbolated wadding, or carbolized sponge (sponge soaked in a two per cent. solution of carbolic acid.) By such a measure a thrombosis of the bleeding vessels is produced, the hemorrhage checked, and increase of the hæmatoma limited. Large tampons are required; if properly applied, a tumor as large as the fist can be reduced, and safely conducted to absorption.

In more serious cases inflammation and gangrene may supervene; the skin becomes discolored and tense, and threatens to break. In such cases the indication is to make an incision at the most dependent part of the tumor, empty its contents, and

wash with injection, of a dilute solution of chloride of iron (1 to 200.) When the tumor is very large, with neither inflammation nor absorption going on, it is best to wait four to five days, when an incision may be made with less danger of hemorrhage following.

# PUERPERAL SHOCK.

PROF. WM. LEISHMAN, M. D., GLASGOW.

Shock to the nervous system by a tedious or severe labor may prove fatal, without hemorrhage or organic injury. As TRAVERS observes, pain of itself is destructive. This author believes it must be the pain of the second stage. The treatment is the union of an anodyne with stimulants; wine and brandy freely, till reaction is obtained, and then substituted by chicken broth. Meantime, give

329. ℞. Mist. camphoræ, f.℥ vj.
Ammon. carb., ℥ ij.
Tr. opii, gtt. lx. M.

Dose, a tablespoonful every one, two, or three hours. With this, she must be perfectly quiet, the room darkened, and the patient allowed to sleep as long as she can.

It is with a view to avoid the shock, the exhaustion of the second stage of labor, that the editor would urge the use of *chloral*, until the delivery can be accomplished by the employment of the forceps. The best treatment will be to prevent shock by avoiding its causes.

It would appear that *chloral*, even while producing a calm, refreshing sleep, does not by any means check the progress of labor when this has commenced. For it is invariably found that dilatation has continued, and generally so readily is this accomplished, that a speedy delivery often follows its use. The editor regards this remedy as producing results similar to those of anæsthetics in surgery, and therefore similarly indicated. Again, while it relieves the pains of travail, it thus greatly contributes to a safe and speedy convalescence. It prevents the terrible exhaustion and shock to the system too often seen to follow an unaided labor.*

* On the prevention of shock by the early use of the *forceps*, see also that subject in "Hints in the Obstetric Procedure."

# PELVIC CELLULITIS AND PERITONITIS (PUERPERAL PHLEBITIS AND METRITIS.)

T. G. THOMAS, M. D., NEW YORK,

Has tabulated the points of differential diagnosis between pelvic cellulitis and peritonitis as follows:

| *Cellulitis.* | *Peritonitis.* |
|---|---|
| 1. Tumor easily reached; generally felt in one broad ligament; may be felt above the pelvic brim. | Board-like feel to the vaginal roof. Tumor very high, only felt in the vaginal cul de sac; does not extend above the superior strait. |
| 2. Marked tendency to suppuration. | Suppuration rare. |
| 3. Abdominal tenderness in one iliac fossa. | Abdominal tenderness excessive above the brim. |
| 4. Tumefaction laterally in the pelvis. | Tumefaction near or upon the median line. |
| 5. Tendency to monthly relapse not marked. | Tendency to monthly relapse very marked. |
| 6. Pain severe and steady. | Pain excessive, often paroxysmal. |
| 7. Facies not much altered. | Very anxious. |
| 8. Nausea and vomiting not excessive. | Nausea and vomiting often excessive. |
| 9. Not accompanied by tympanites. | Always accompanied by tympanites. |
| 10. Uterus fixed to a limited extent. | Uterus immovable on all sides. |
| 11. Not necessarily displaced. | Always displaced. |
| 12. Cause. Parturition, abortions, operations on the pelvic viscera. | Diseases of the ovaries, gonorrhœa, exposure during menstruation, fluid in the peritoneum. |

PROF. WM. GOODELL, M. D., PHILADELPHIA,

In *Philadelphia Medical Times*, 1880, gives the following advice as to treatment:

The disease having been recognized, administer at once a full hypodermic dose of *morphia*, and from 10 to 20 grains of *quinia* by the mouth. These measures, taken promptly, will often stop the disease at once.

Failing to abort the attack, we must paint the abdomen with iodine and put on a poultice, covering it with oiled silk, or greased brown paper; it will then remain soft for twenty-four hours. The patient must have large doses of quinia. If the temperature be high she should have 10 grains at a time, and from 30 to 40 grains in the course of the day. Large doses of morphia must also be given. If the woman be plethoric, the morphia may be given by the mouth, with neutral mixture and wine of ipecacuanha, or in some other fever mixture. In some cases tonics are demanded. If the sickness last for more than a week, and the local tenderness increase, put on a blister promptly.

Later, muriate of ammonia is an excellent remedy in this disease; so, too, is aconite. Dr. GOODELL usually prescribes the following:

| | | | |
|---|---|---|---|
| 330. ℞. | Mist. glycyrrhizæ comp., | f. ℥ vj. | |
| | Ammoniæ muriatis, | ℥ ij. | |
| | Hydrarg. chloridi corrosivi, | gr. j. | |
| | Tinct. aconiti radicis, | gtt. xxiv. | M. |

A tablespoonful in water every six hours

As concerns routine treatment, the patient should take plenty of milk, whiskey, beef-tea, and large doses daily of dialyzed iron.

PROF. W. S. PLAYFAIR, M. D., LONDON.

The important points are relief of pain and absolute rest. If seen at an early stage, blood taken locally by leeches to the groin or to the hemorrhoidal veins may give relief. Leeches to the

uterus are likely to cause harm by the irritation of passing the speculum. Opiates in large doses, or by suppositories, or subcutaneously, are the best when the pain is at all severe. When paroxysmal, use suppositories immediately the pain threatens. When there is much pyrexia, give large doses of quinine. Keep the bowels free; nothing answers so well as castor oil, one-half a teaspoonful every morning. Warmth and moisture to the abdomen give great relief in the form of linseed-meal poultices; or if these are too heavy, use spongeo-piline soaked in boiling water. Poultices may be sprinkled with laudanum or belladonna liniment. Absolute rest in the recumbent position must be enforced for some time after the symptoms abate. Then absorption may be favored by the long-continued use daily of tincture of iodine until the skin peels, or by frequently-repeated blisters. This is better than keeping an open sore by irritants. When an abscess has formed and points in the groin, make a free incision, and employ antiseptics. Wait till the pus is near the surface. In these operations, the aspirator is a valuable instrument.

Diet should be abundant, simple and nutritious. Make up for the drain caused by suppuration. Tonics, iron, quinine, and cod-liver oil, will be useful.

### DR. JAMES R. CHADWICK, OF BOSTON.

In conditions that follow inflammation of the pelvic organs and of the pelvic peritoneum or cellular tissue, characterized by painful defecation, backache, pain, burning sensation, etc., this practitioner has used with great relief the *hot rectal douche.* (*Trans. Amer. Gyn. Soc.*, 1880.) The method of administering it with a view to obtaining its utmost benefits, aims at securing the passage of the water in large volume to as high a point as possible in the alimentary tract, and its retention for as long a period as possible. Water is taken at as high a temperature as can be borne by the hand; the patient is placed upon her side, preferably the right, in bed; a fountain syringe, holding two

quarts, is employed, suspended quite low, so that the flow of water may be slow; as soon as the patient has a sensation of a desire to defecate, or the rectum is felt by the finger in the vagina to be distended, the current of water is arrested for a few minutes, without withdrawal of the nozzle from the anus. In this wise one or two quarts of water may commonly be introduced without exciting peristaltic action. The patient must remain quiet for a quarter to half an hour, when, if not sooner, the rectum will generally have expelled a portion, if not all, of the water. Dr. C. did not deem it wise for the patient to resist the expulsive action of the intestine, because it will thereby be incited to more violent efforts, which will counteract, in a measure, the beneficial action of the douche. He was unable to determine how high in the intestine the water usually passes, but was satisfied that it occasionally traverses the whole large intestine to the ileo-cæcal valve. Whether, in its ascent, the water is propelled in part by retrostalsis, he was likewise in doubt, although he was fully convinced, by his own experience, that retrostalsis actually does occur under some circumstances.

He generally directs that the douches shall be taken two or three times a day for two or three weeks, then to be intermitted for a week, although this last precaution he hardly thought necessary, for he had several times continued the injections four or five weeks without causing any ill effect upon the rectum. In a certain number of cases the douche had given rise to pain at the time of injection, or immediately afterward, when he had considered it as contra-indicated.

### PROF. FORDYCE BARKER, M. D., NEW YORK.

In this disease this author directs absolute quiet in bed, and regards the danger of relapse as imminent if the patient gets up or moves much. If there be much pain in micturition, and the bladder be not thus entirely emptied, a catheter should be used. He believes that the bowels should be kept free from fæcal evacuations by teaspoonful to tablespoonful doses of the compound

magnesia powder, or the compound licorice powder, of the German Pharmacopœia. If the pain be very acute in the commencement of the attack he usually overwhelms it by one hypodermic injection of morphia, and relies afterwards upon opium suppositories. The lower portion of the abdomen should be kept covered by hot poultices of ground flaxseed, over which should be placed oiled silk, so that the poultice may retain its warmth for some hours. After the acute stage has passed away, cotton-wool, wet with laudanum, and also covered with oiled silk, may be substituted for the poultices. For some years he has discarded cups, leeches, and local depletion.

In the cases which assume a subacute or chronic form, he has witnessed much benefit from injections of water into the vagina as hot as can be comfortably tolerated. In the employment of these injections, the patient should lie across the bed, with the hips well over its edge, and the feet upon two chairs. An India-rubber sheet should be placed well under her, between her hips and her clothing, not only to prevent the latter from getting wet, but also to conduct the water, as it flows back from the vagina, down to a vessel which is placed on the floor. Then by the use of a Davidson syringe, two or three gallons of hot water may be injected into the vagina by the nurse. A still more easy method is to have a pail, with a stop-cock at the bottom, which connects with a long India-rubber tube, having a vaginal pipe at the end. This pail is placed on an elevation of a few inches above the patient, and the water is allowed to run in and out of the vagina. Not only do the patients generally derive great comfort from this warm poulticing, but if the physician immediately after makes a vaginal examination, he will need no argument to convince him what a powerful agent this is in modifying tissue.

He employs quinine at an early period of this disease, giving it in as full doses as the patient can bear without inconvenience. If symptoms of suppuration, cachexia and hectic fever, come on, he relies on quinine and alcohol pushed to the point of tolerance, as internal remedies, and on surgical means for giving exit to the purulent collection.

So soon as the least fluctuation can be detected in any part of the pelvic cavity, Prof. B. directs that it be aspirated. He considers this a safe procedure—that it gives immediate relief to pain, that it shortens the duration of the disease, and is a prophylactic measure against disorganization of adjacent tissues.

*Puerperal Metritis.* If he finds the patient with pain in the hypogastrium, and the uterus larger than it should be at the time of the puerperal period and painful on pressure, the lochia diminished in a marked degree, or perhaps wholly arrested; or, on the other hand, a return or positive increase in the amount of blood lost in the discharge, with a quick pulse, and more or less fever, he at once gives the following powder, well mixed, in a wineglass of sugar and water:

331. ℞. Tully's powder,
Potass bicarb., āā gr. x.
Hydrarg. chloridi mitis, gr. v. M.

If the skin be very hot and dry, and the pulse very hard, he may substitute the following:

332. ℞. Pulv. potass. nitrat., gr. x.
Pulv. gum camphor,
Hydrarg. chloridi mitis, āā gr. v.
Pulv Jacobi veri, gr. iij.
Pulv. opii, gr. j.
Vel. morphiæ sulph., gr. ½. M.

He anticipates the following effect from these powders: The pain will be relieved; nervous irritation allayed; sleep induced; fever subdued; diaphoresis promoted; and eight or ten hours after, an easy, revulsive cathartic action will follow. If cathartic action do not follow in ten hours, he orders a saline cathartic.

He also directs that turpentine stupes be applied over the uterus and kept on until the patient insists on their removal, when cotton batting should be laid over the uterus, and this should be covered with oiled silk. If the patient complains of severe pain or burning from the turpentine, the cotton may be wet with laudanum. If the disease be of a sthenic type, he has

derived great benefit from the application of six or eight wet cups over the uterus, but repudiates the use of leeches as very objectionable. If, after two or three days, there be not evident decrease in the uterine tumor, applies a blister over the uterus. In cases in which the uterus does not undergo the usual involution, while the lochial discharge is profuse and sanguineous, he has derived advantage from the following combination:

333. ℞. Ext. ergot. fld.,
Tinct. nucis vomicæ,
Tinct. ferri chloridi, āā f.℥ ss.
Glycerine,
Syrup aurant. cort., āā f.℥ j. M.

Sig.—Teaspoonful in a wineglassful of sugar and water every fourth hour. This usually reduces the size of the uterus, and diminishes the hemorrhagic lochia within twenty-four hours.

He also regards vaginal injections as absolutely essential throughout the whole treatment of puerperal metritis. Formerly he used Labarraque's solution of the chlorinated sodium in warm water, as strong as the patient can bear without smarting; recently he has employed the following:

334. ℞. Acid carbolic. glacial,
Glycerine, āā f.℥ j.
Aquæ puræ, f.℥ vij. M.

Sig.—A tablespoonful in a tumbler of warm water.

If the lochial discharge be very purulent, and particularly if the odor be offensive, the injections should be used four, five, or six times a day. If the discharges be positively fœtid, this author advises intra-uterine injections; and that intra-uterine injections be given with either a Scanzoni or French irrigator, or a fountain syringe, because we can thus adjust the force with which the fluid enters the uterine cavity. He believes that the fatal results which have ensued in the employment of intra-uterine injections, have accrued from their improper application. The danger seems to arise from the entrance of air into a vein, as in some cases, in which death has been sudden, or from the

passage of fluid into the fallopian tubes, and peritonitis or phlebitis has ensued.

In the suppurative and putrescent stages of puerperal metritis, our main reliance in connection with the intra-uterine injections must be on alcohol and quinine. He prefers giving the quinine in doses from 5 to 10 grains twice a day, instead of the smaller doses frequently repeated. The whiskey or brandy should be administered as freely as the patient can take it without any unpleasant effects.

*Puerperal Peritonitis.* For this disease this author regards opium as the great remedy; that it retards or arrests the peristaltic movements of the bowels, gives the inflamed parts absolute rest, pain is relieved, nervous system tranquilized, sleep secured, and thus the depression of the vital forces, resulting from the shock of the attack, is lessened. The opiate, therefore, should be given in such doses as to secure all these. The amount is only limited by the effect produced. It should be given freely until some narcotism is produced, and the respirations diminished in number, but it should not be pushed beyond this point. If the respirations fall below twelve or fifteen, and the pupil be much contracted, the opiate should be withheld until these effects pass by. This line of treatment should be pursued until the inflammation is completely extinguished.

Our author directs that we begin treatment by giving ten drops of Magendie's solution every hour, and gradually increasing the doses if the effects sought be not manifested. If the drops be rejected by the stomach, administer morphia hypodermically until the stomach will tolerate it. In some cases the tolerance of opium is remarkable. One case took 106 grains of opium and its equivalent in morphia during the first twenty-six hours, and in the second twenty-four hours 472 grains of opium.

Prof. B. places also a high estimate on veratrum viride in allaying vascular excitement. In conjunction with morphia, it reduces the number of pulsations without reducing the strength or increasing the degree of vital depression.

For the pain in the abdomen and the tympanites, he applies the oil of turpentine on two thicknesses of flannel, previously dipped in hot water and wrung out as dry as possible; this is to be left on as long as the patient can be induced to bear it. On taking off the flannel the abdomen should be covered with a light layer of cotton-wool, at least an inch or two in thickness and wet with laudanum. The turpentine stupes should be re-applied once or twice a day, if the abdomen show a tendency to again become distended and painful, and the cotton batting with the laudanum should be re-applied every few hours. In cases in which the symptoms of peritonitis have in a great measure subsided by apparent localization and induration, almost forming a circumscribed tumor, our author has witnessed much benefit follow the application of a blister. He directs that it be applied in the morning, so that it can be well watched, and that it be taken off and a warm poultice applied as soon as vesication has fairly commenced. In this way the blister is well filled with serous exudation, there is very little pain or soreness, and all danger of strangury is averted.

In all cases in which the peritonitis is a complication of puerperal fever, he has found quinine an efficient remedy, especially in cases in which the chills are recurrent, or when there are symptoms indicating a tendency to purulent exudation. He prefers giving it in one or two impressive doses during the day to the small and frequently repeated doses—that is, give about 5 to 10 grains in the morning and from 10 to 20 in the evening. There is a decided tolerance to quinine in this disease. He also values alcohol in this disease. It renews the nervous forces, which are generally in a state of extreme prostration, probably by the cerebral hyperæmia induced by the alcohol. In this, as in other diseases with great depression, patients are able to bear four, five, or even ten times the quantity that could be taken in health, without the least approach to intoxication. It diminishes waste, and thus tends to cause a diseased structure, in which vital changes are abnormally active, to return to its normal and much less active condition. With the whiskey or

brandy he combines veratrum viride if there be considerable vascular excitement. This combination often reduces the pulse when either of these agents individually fails.

He also recommends the following vaginal injection:

335. ℞. Glycerinæ,
Acid. carbolic. glacial, āā f.℥j.
Aquæ puræ, f.℥vj. M.

Sig.—A tablespoonful added to half a pint of warm water, and carefully injected into the vagina twice a day. If the lochia be very abundant and fœtid, the amount of carbolic acid may be doubled or even quadrupled.

The food should consist of beef-tea, panada, caudle, milk, and lime-water.

Our author has no confidence in the aplastic properties of mercury; yet in cases in which there is vomiting of bilious matter he gives 10 grains of calomel well rubbed up with 20 grains of bicarbonate of sodium.

Although generally averse to venesection in this disease, he believes it is strongly indicated in some of the more sthenic cases, and employed with good results.

Stimulants should be given so soon as feebleness of the pulse, clamminess of the surface, profuse perspirations, or cold extremities, are noticed. Stimulants decrease the frequency and increase the force of the pulse.

Another important point, is nutrition. Food in a liquid form should be taken as freely as it can be digested and assimilated. Milk, eggs, gruels, beef-tea, mutton broth, chicken soup, given every two or three hours, are useful.

Purgatives, as a rule, are not desirable. Sometimes, however, when the tongue has a thick pasty coat, and there is a great deal of bilious vomiting, he gives a powder composed of from 5 to 10 grains of calomel, and 20 grains of the bicarbonate of sodium.

### PROF. F. WINCKEL, M. D., DRESDEN.

*Puerperal Metritis.* He advises in this disease the horizontal

posture; avoidance of all needless movements, and
enemata. When the abdominal pain is great, le
applied to the abdominal wall; but a speedier eff
by ice-water compresses, and the ice-bag. Whe
dispensed with, inunction with 15 grains of
ment should be made every two hours until sali
with iodide of potassium ointment, together with
If the discharge is offensive, inject with tar-w
nate of potassa, and with mucilaginous fluids.
tion in every way, if there is effusion. If t
ate speedily. When the fever subsides, giv
*of potassium*, 5 grains three times a day.

PROF. WM. LEISHMAN, M. D

The most important point is to re
the pelvic brim, poultices and fomen
most grateful. When vaginal, the d
ries, may be used. BERNUTZ stron
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the patient is greatly aided by i
which turpentine may be added.
the locality may prevent supp
they should be applied direct
a time, and, if necessary, en
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In addition to the remed
not contra-indicated, use
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or the tincture of iodin
Blisters may be used, b
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al wall. He has reported
were restored to health
ludes that it is neither a
operation.

336. ℞. Tinct. aconiti rad., f.ʒ ij.
Tinct. opii deod., f.ʒ vj. M.
Dose, eight drops in water every hour or two. This in peritonitis.

*Acidum Carbolicum* in vaginal injections. (F. 334, 335.)

**Ammonii Murias* is believed by many to act powerfully as a sorbefacient.

*Camphora*, in combination with nitrate of potassa and opium, is used by a number of practitioners. (F. 332.)

*Conium* is urged by BERNUTZ. (P. 480.)

**Hydrargyrum*, either by the mouth or by inunction, is generally employed.

**Iodinium*. This remedy is highly useful, externally applied to the abdomen.

**Morphia*, in full doses, and combined with quinia, is regarded by many practitioners as the best means of treatment.

BARTHOLOW says that the hypodermic injection of morphia will sometimes jugulate peritonitis, if given at the outset. If the period for such a favorable result has passed, the course and duration can be greatly modified by opium judiciously used. The quantity will be determined by the effect; the pain should be relieved, the pupils somewhat contracted.

**Potassii Iodidum*, is very useful to aid in the absorption of effusions.

*Potassii Nitras* is useful when the skin is hot and dry, and the pulse hard.

**Quinia* must be given in large doses, and continued.

*Terrebinthinæ Oleum*, in the form of stupes, during the acute stage, is recommended by BARTHOLOW and others.

*Veratrum Viride*, either alone or combined with morphia, to allay vascular excitement.

### OTHER MEASURES.

*Aspiration* in pelvic exudations, although frequently employed, has not yielded very satisfactory results. Cellulitis not unfrequently follows.

*Blisters* favor absorption, and should be frequently repeated.

*Cold*, in peritonitis, is recommended in the form of the ice-bag by WINCKEL and BARTHOLOW. The latter says when the inflammation is recent, the abdomen may be covered with an ice-bag. It is proper to interpose a napkin between the skin and the bag.

*Injections* of hot water are highly lauded, especially by Prof. BARKER. They act like local poultices, and certainly are capable of great good.

Vaginal injections of carbolic acid, permanganate of potassa, and chlorinated sodium, are also extremely valuable as disinfectants and antiseptics.

*Leeches* applied to the groin or to the hemorrhoidal veins may be employed. Never to the uterus. BARKER discards them entirely.

*Poultices* are very comforting by their warmth and moisture. These may be greatly aided by the addition of laudanum, belladonna, etc.

*Rest.* This must be absolute, and not departed from until all danger of a relapse has disappeared.

*Section, abdominal.* Mr. LAWSON TAIT advocates the principle of opening and draining the various conditions of suppuration classed as "pelvic abscess." He points out, and quotes Dr. WEST in support, that in very many of these cases the abscess opens into the rectum or other part of the intestine, the bladder, or round amongst the muscles of the anterior abdominal wall. When such openings are established either death occurs or recovery is extremely protracted. Even when the abscess opens into the vagina or can be tapped from that canal, the recovery is frequently prolonged to an extent not commensurate with the size of the abscess. He opens from above, carefully stitching the lips of the opening to the abdominal wall. He has reported six cases where the patients were restored to health in thirty days. He concludes that it is neither a difficult nor a dangerous operation.

# PHLEGMASIA DOLENS.

DR. JOSEPH AMANN, OF MUNICH.*

The *prophylaxis* in this disease is very important. If signs of fever and pain in the limb appear, the patient should remain in bed, receive no visits, and observe a strict diet. Every precaution should be taken to remove all causes of excitement or irritation, moral or physical.

An important point is the position of the patient; she should lie so that the leg of the affected limb is more elevated than its thigh; for this purpose, the leg should be laid on a soft elastic cushion, the knee being bent. The bowels should be moved by a moderate laxative. Venesection, formerly employed, is now out of date. At most, a few leeches may be applied near the painful point, in order to reduce the hyperæmia.

Of local applications, the most efficient are—cloths wrung out in lead-water, or ice-water; and, later, inunction of an ointment composed of equal parts of mercurial ointment and lard. Of the latter, a piece the size of a bean may be rubbed into the thigh and groin twice daily, until a mercurial impression on the gums is noticed, after which frictions with camphorated oil and alcohol may be substituted. When the fever has disappeared, the swelling may be painted with tincture of iodine, and the limb bandaged.

The patient should keep her bed for some days after all fever has disappeared, as a part of the thrombus may be loosed by active motion.

In that form of the disease, when there is subcutaneous inflammation of the limb without thrombosis in the veins, the same precautions in putting the patient to bed should be observed, and the limb similarly rubbed with dilute mercurial ointment. But should speedy improvement not follow these

* *Klinik der Wochenbettkrankheiten*, 1877.

measures, the physician should not delay to make free incisions in the skin, to give vent to the pus which has formed, and to lessen the tension and swelling. A rapid change for the better will follow this measure. Applications of cloths wrung out in warm chamomile tea, and washing the wound with weak carbolic acid lotion, (one per cent.,) will appropriately follow. Of course the general strength must be supported by wine, soups, milk, etc.

### DR. J. L. POWERS, OF IOWA.

This practitioner (*Trans. Iowa State Soc.*, 1880,) has found great benefit from applying a tobacco salve or plaster to the limb throughout its whole length. Within twenty-four hours the painful stasis is relieved, and in a few days the patient is fully restored. The formula he uses is the following:

337. ℞.

| | |
|---|---|
| Navy plug tobacco, | ½ pound. |
| Tallow, | ½ " |
| Rosin, | ½ " |
| Lard or olive oil, | ½ " |
| Beeswax, | ½ " |
| Balsam fir, | 1 ounce. |
| Burgundy pitch, | ½ pound. |
| Vinegar, | 2 pints. |
| Water, | ½ pint. |

Cut up the tobacco and soak it in the water till soft; add one pint of the vinegar, boil, strain, and add the second pint; boil and strain, and add the wax, rosin and lard. Boil till all the water evaporates, add the balsam fir, and stir till cool.

A plan recommended by Dr. CRICHTON, in a paper read before the British Medical Association in 1871, is to apply a solution gr. xxx. to ℥j. of the *sulphate of iron*, using it as hot as it can be borne. This has been tried by some American physicians, and is said to be followed by a marked diminution of the pain and swelling, and to be one of the best local applications. (*Albany Medical Annals*, August, 1880.)

### PROF. FORDYCE BARKER, M. D., NEW YORK.

The disease tends to a spontaneous recovery, and generally dis-

appears without serious consequences. Hence any treatment which disturbs the system or the normal functions, is objectionable. The indications are:

1. To allay the irritation of the nervous system, which can best be done by full doses of opium where there is no idiosyncrasy to prevent its use.

3. To suppport the system by nutritious food, stimulants and tonics. Of the last-mentioned, quinine and iron hold the first place.

Only in cases where special indications exist should catharsis be induced, or cups be applied over the kidneys. In nearly all cases there is no occasion whatever for these.

After the first two or three days, the disease becomes mostly local. The patient should keep quiet, the limbs be elevated at an angle above the trunk by raising the lower part of the mattress, and where there is hyperæsthesia of the surface and pain in the deep-seated nerves, much relief will be obtained by gently rubbing the surface with a liniment like the following:

338. ℞. Linimenti saponis co., f.℥ vj.
Tincturæ opii, f.℥ iss.
Tinct. aconiti radicis, f.℥ ss.
Extracti belladonnæ, ℥ ss. M.

For a liniment.

The rubbing with this should be gentle and continued for fifteen or twenty minutes, and *always toward the trunk*. This may be repeated every six hours, after which the leg should be enveloped in cotton batting and covered with raw silk.

After the period of acute tension, the leg should be examined for localized phlegmon, and if any circumscribed collection of pus be discovered, it should be evacuated at once; otherwise the tonicity of the tissues will best be promoted by applying a roller bandage, beginning at the toes and carrying it up the whole length of the limb. This should be worn so long as there is any tendency to œdema of the foot and leg. The patient should not be permitted to walk until all evidence of local disease has disappeared.

PROF. W. S. PLAYFAIR, M. D., LONDON,

Agrees in the main with the treatment above recommended. For the relief of the pain, he has found one of the best measures to be wrapping the entire limb in linseed meal poultices, or in warm flannel stupes, the surface of which may be freely sprinkled with laudanum, chloroform, or belladonna liniment. Blisters, leeches, or any form of counter-irritation or abstraction of blood, he does not approve of. Internally, he thinks chlorate of potassa, with dilute hydrochloric acid, quinine, ammonia and iron, are the drugs most likely to prove of service. As an anodyne, generally nothing answers so well as the hypodermic injection of morphia.

At a later stage, support with a roller may be combined with gentle inunctions of weak iodine ointment. And shampooing or rough friction of the limb should be avoided, on account of the danger of producing embolism. The occasional use of the electric current is said to promote absorption.

PROF. F. WINCKEL, M. D., DRESDEN.

The leg must be raised a little higher than the thigh, and the knee flexed; the foot and calf supported by pillows to prevent the rotation outward; apply compresses of lead-water; rub over the skin about Poupart's ligament a piece of ungent. hydrarg. the size of a bean, three times a day. If the pain is acute, add laudanum to the lead-water. Open any vesicles that may form, and evacuate the serum. When the pain and swelling subside, paint with tinct. iodine or Lugol's solution, and cover with wet compresses; bandage the leg to produce reduction.

BŒR claims good results from a blister the width of two fingers, around the thigh, just above the knee.

A proper support of the limb will be required when the patient leaves the bed.

*Bandaging* the limb, beginning at the toes and proceeding to-

ward the body, is a valuable part of the treatment. Some prefer to bandage with flannel cloths wrung out of hot water.

*Position* is an important aid in the treatment. The limbs should be elevated on pillows until they form an angle of thirty or forty degrees with the body. This has been followed by excellent results in the practice of Dr. J. C. McMechan, of Cincinnati. (*Cin. Lancet and Clinic*, January, 1881.)

## MILK FEVER.

This affection, formerly so much dreaded, and believed so frequently to occur on the third day, on the occasion of the appearance of the milk, is now by some regarded as virtually a myth. In many instances, a slight increase of heat, pulse, etc., occurring at the time when the secretion of the milk commences, is regarded as a true form of fever, and treated with so much energy as frequently to induce a real disorder more or less serious. The best authorities now agree that the better regimen allowed to the lying-in woman, and the more sensible mode of conducting labor which at present has become the practice, prevents many of these abnormal tendencies.

PLAYFAIR, WINCKEL, GRÜNEWALL, D'ESPINE, and others, agree in this belief, or regard the fever as a mild septicæmia. GRAILY HEWITT believes that it only occurs where the patient is weakened either by a prolonged and exhausting labor, from hemorrhage, or from insufficient nourishment.

### DR. JOSEPH AMANN, OF MUNICH.*

This author observes that while no doubt the term "milk fever," *febris lactea*, was in former days quite too widely and loosely used, he cannot, on the other hand, consent with WINCKEL and others, to banish it from midwifery. It is his observation that in at least 6 per cent. of parturients a febrile condition appears between the third and fourth day post partum, lasting from 24 to 48 hours, without having any other assignable cause than the swelling and irritation of the mammæ produced by an impeded flow of the secretion.

Similar feverish conditions arise from prolonged constipation, collection of gas in the intestine, severe loss of blood, impedi-

* *Klinik der Wachenbettkrankheiten.*

ments to the discharge of the lochia, mental excitement and the rheumatic diathesis.

The indications for treatment have reference to the causes here assigned. When the flow of milk is impeded the child must be diligently applied to the breast or suction by an adult or a breast-pump substituted. The breast may also be rubbed gently with oil of almonds, or covered with a spermaceti plaster, or compressed with a bandage, the gland being surrounded with wadding or tow. The bowels should be acted on, a dose of castor-oil, say f. ℥ i., in four spoonfuls of black coffee. When there is caprostasis, large enemata should be used so as thoroughly to wash out the lower bowel.

When the lochia are scanty, involution delayed or a danger of septic absorption present, the remedy called for is *ergot*, and along with this, the vagina should be thoroughly washed out two or three times daily with luke-warm water containing half per cent. of carbolic acid. Should the febrile symptoms not yield promptly to these measures, *quinine* should be administered, grs. xxx.–xlv., in divided doses, within two days.

If it is believed that the feverish symptoms are of nervous or mental origin, a sufficient treatment will be to enjoin entire rest and quiet, and to exhibit small doses of morphia.

Rheumatic symptoms demand special attention to protection from drafts, etc.; while fever from loss of blood indicates concentrated nourishment, quinine, coffee and stimulants.

PROF. FORDYCE BARKER, M. D., NEW YORK,

Regards it as an exceptional incident of child-bed, and gives the following prophylactic measures:

Secure to the patient some hours of sound and refreshing sleep immediately after delivery.

Give such food as will be abundantly nutritious, without overtaxing the digestive organs.

Apply the child to the breast as soon as the patient has recovered from the exhaustion of labor.

When the symptoms of milk fever present themselves, if the bowels have not been fully moved, give a saline laxative; subdue vascular excitement, and promote diaphoresis. The following is very effective:

| | | | | |
|---|---|---|---|---|
| 339. ℞. | Tinct. aconit. rad., | | gtt. xx. | |
| | Antimonii et potassii tartratis, | | gr. ij. | |
| | Spirit. etheris nitrici, | | | |
| | Syrupi simplicis, | āā | f. ʒ j. | |
| | Aquæ aurantii flor., | | f. ʒ ij. | M. |

A teaspoonful in a wineglassful of sugar and water every two hours.

Have the nurse gently, but thoroughly, rub the breasts from the circumference toward the nipple with warm sweet oil every two hours till the distention has subsided, allay pain and nervous irritability, and secure sleep by a diaphoretic anodyne, as 8 to 18 grains of compound ipecac. powder or of Tully's powder.

Prof. KARL SCHROEDER and Prof. W. LEISHMAN, agree that the milk fever is due to the distention of the breasts, and regardless of the amount of fever, these organs demand prompt attention, as by keeping them soft, frequently emptying them, applying evaporating lotions, relieving the dragging, etc., by suspending the inflamed gland; in short, by removing the cause, the fever itself is removed.

# PUERPERAL CONVALESCENCE.

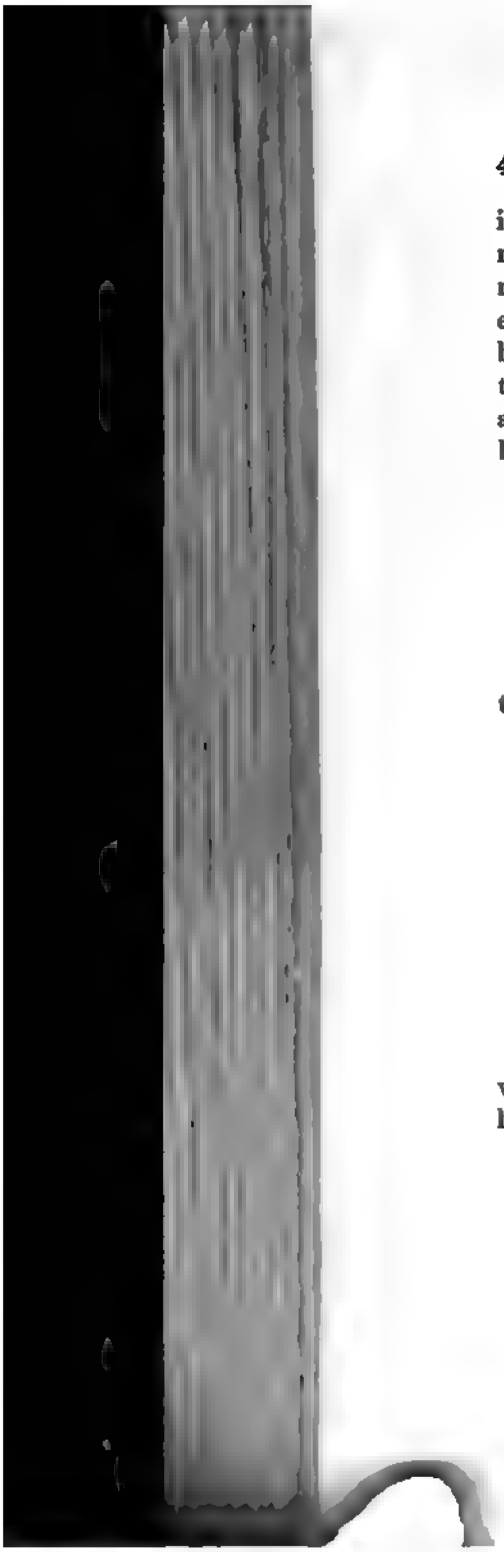
PROF. FORDYCE BARKER, M. D., NEW YORK.

During this period, the chief indications are: First, the restoration of the pelvic organs to their normal condition, and the development of lactation. The accomplishment of the first in the multiparæ is usually attended with uterine contractions of an intermittent character. Our author thinks much can be accomplished by way of preventing their occurrence; that they are usually the result of coagula in the cavity of the uterus which distend its walls, and excite spasmodic contractions. The retention of these may be obviated by firm pressure over the fundus during the time the trunk of the fœtus is being expelled, and maintained until the placenta is delivered, and a permanent contraction of the uterus is secured. If the second stage is too rapid, or too prolonged, he gives a teaspoonful of the fluid extract of ergot, just as the delivery of the child is taking place. If the after-pains come on a few hours after the delivery, the first pressure should be renewed so as to expel coagula. It often gives relief. At a late period this must not be attempted, for fear that it may excite irritation and inflammation. He then relies on the following formula, known as Tully's powder:

340. ℞. Pulv. g. camphor,
Cretæ pp.,
Pulv. glycrrh., āā ℈j.
Morphiæ sulph., gr. j. M.

Dose.—The same as Dover's powder.

The severe after-pains sometimes occurring a day or two after labor, and excited by the pressure of flatus, must not be confounded with peritonitis. This diagnosis is easily made; while a slight touch causes pain, the pain entirely disappears upon continued pressure; it returns as soon as the pressure is removed. On the other hand, the pain due to peritonitis will be increased





in ratio to the pressure made. After-pains c
most speedily relieved by turpentine stupes and
mata. Sometimes after-pains of a purely neura
encountered. They do not yield to opium in
but are relieved by quinine and chloroform lini
the quinine in doses from 5 to 10 grains, nig
and applies the liniment by saturating a piece o
ble thickness. The formula for the liniment is

341. ℞. Chloroformi,
Linimenti saponis co.,

RETARDED INVOLUTION.

If the uterus can be felt above the pubes a fe
turition, our author prescribes the following:

342. ℞. Ext. ergot. fluid.,
Tinct. nucis vomicæ,
Tinct. ferri chloridi,
Tinct. cinnamom. cort., āā
Sig.—Tablespoonful in a wineglassful of sugar and wa

LAXATIVES FOR PUERPERAL WO

PROF. FORDYCE BARKER, M. D., NEW

Our author opposes the indiscriminate dose
very truthfully states that it often excites h
highly recommends the following pills:

343 .℞. Ext. colocynth co.,
Ext. hyoscyami,
Pulv. aloës soc.,
Ext. nucis vomicæ,
Podophyllin,
Pulv. ipecacuanhæ, āā
Ft. pil. No. xii.

Two of these usually secure the desired e

bowels. One of these may be taken daily to keep the intestinal canal free from fæcal accumulations.

When there are flatulence and severe after-pains in consequence of constipation, he recommends the following:

| | | | | |
|---|---|---|---|---|
| 344. ℞. | Ext. sennæ fluid., | | | |
| | Syrup. zingiberis, | āā | f. ℥ vj. | |
| | Tinct. jalapæ, | | f. ℥ ss. | |
| | Tinct. nucis vomicæ, | | gtt. xl. | M. |

Sig.—A tablespoonful in a wineglassful of sugar and water.

*Diet.* Our author very positively dissents from the formerly pursued plan of restricting the diet of the parturient woman to toast and tea. He very judiciously remarks that at this epoch of maternity, her wearied and exhausted system, with the additional taxation of lactation, requires food to meet the new demand for the nourishment of her offspring, and to restore her own strength and vigor. He further objects to the application of any arbitrary rules to all women, and enjoins the necessity of indvidualizing each case and adapting the diet to the various conditions of the patient. Some are very much benefited by an immediate restoration to their former diet, while others need more restrictions, and the adaptation of the diet to the various pathological conditions evinced. It should, however, in all cases be as abundant as the digestive organs can digest, and the assimilative organs can appropriate without inconvenience, and of nutritious quality.

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antiphlogistic measures are
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As soon as their bites are
repeatedly painted over the
the bone must be sedulously

be begun in the same manner.
mineral waters is beneficial; and
be had to opium suppositories
morphia, preferably the latter, as
produce constipation. Counter-
cautery has proved a benefit.
methodical massage; and as
rheumatic in origin, colchicum
in such instances.

DUNCAN, M. D., OF LONDON.†

well of the term "coccygodynia,"
sitting." True coccygodynia is *neu-*
common disease in both sexes.

*Handbuch der Frauenkrankheiten.*
*Women*, 1880.

This form of the disease is generally easily cured. The treatment is the use of laxatives, hot bathing, and sedative applications. In a severe and persistent case, it is proper to try the hypodermic injection of morphia.

Other cases arise from the injury of the joint or ligaments of the coccyx, or from a rheumatic inflammatory condition of the ligaments. In such cases, where the treatment above described fails, it may be well to divide the sacro-sciatic ligaments at their attachments to the coccyx. This frequently fails, but once in a while succeeds.

In *dislocation of the coccyx* there is no permanent pain or tenderness, but only inconvenience when it is backward; when forward it is painful. Reduction in such cases is usually not practicable. Removing the coccyx altogether has been recommended. This has not proved a satisfactory proceeding; yet in some cases, not very easily defined, it does present itself as a probable means of getting rid of the annoyance.

PROF. EDWARD W. JENKS, M. D., OF CHICAGO,

In a lecture on this complaint (printed in 1880,) reviews its various causes and treatment.

Cases of coccygodynia, which arise from climatic causes, may be similar to cases of myalgia in any of the other muscular structures of the body, will be of rather an acute type, and yield to very much the same treatment as is employed in myalgia.

Chronic cases of a mild character will sometimes yield to epispastics or mild blistering, and anodynes administered either by the mouth or rectum.

Topical application of opium, or belladonna plaster, or chloral liniment, may often prove of service, but when the pain is severe, more potent remedies are required, such as the hypodermic injection of morphine, or atropine, or a combination of the two.

The hypodermic injection of *morphia* over the coccyx may

overcome the irritability and painfulness of the muscles, and possibly effect a cure. But if the case does not improve in a short time under some of these modes of treatment we, must have recourse to surgical art.

The mode of operating for amputation of the coccyx is as follows: Anæsthetize the patient, and place her upon her right side, that the index-finger of the left hand may be introduced into the rectum to press the coccyx backward, and as a guide during the progress of the operation.

Cutting down to the bone with the scalpel, it can be further separated from its attachments by means of scissors, or a knife, as we may choose, and selecting the location where amputation is to be made, we can then disarticulate at the joint, or follow the mode of SIMPSON, who used the bone-forceps and cut the bone without reference to joints.

By one of the procedures mentioned, namely, separation or amputation, we can confidently expect a cure; and as neither is attended with danger, we are also able to class these operations among the satisfactory ones of surgery.

# CHAPTER III.

# DISEASES OF THE MAMMARY GLANDS AND OF LACTATION.

*Mastitis; Inflammation of the Breasts—Mammary Tumors—Mammary Neuralgia (Mastodynia)—Galactorrhœa—Agalactia and Oligolactia—Diseases of the Nipple.*

## MASTITIS AND MAMMARY ABSCESS.

### PROF. H. BILLROTH, OF VIENNA.*

The treatment of acute mastitis consists in putting the patient to bed, on low diet so long as there is fever, and in properly bandaging the breast. To relieve the pain and to prevent the formation of an abscess, warm poultices are required, and if lactation is interrupted, mercurial ointment or iodine ointment may be applied. Prof. B. disapproves of leeches and ice-bags. To check the secretion of milk he gives purgatives or iodide of potash.

Massage of the breasts as practiced by many midwives is painful and may be injurious. The opening of the abscesses should always be done with a knife, and there is no advantage in delay. Very great advantages are here derived from the antiseptic treatment. The breast is first cleaned with soap, then washed with a weak solution of carbolic acid and an incision one centimetre long is to be made in the direction of the radius of the breast. The drainage tube is then inserted, the pus withdrawn the breast again bathed with the carbolic acid lotion, and the breast compressed from all sides with antiseptic gauze.

* *Handbuch der Frauenkrankheiten.*

If the antiseptic precautions are fully carried out, one will never see such cases as were common heretofore, in which the breasts were undermined for months with abscesses, and the woman suffered untold misery.

Even in old cases which have been allowed to open themselves or were incised without antiseptic precautions, we need no longer, as heretofore, have recourse to long incisions. The operation should be conducted as above, the opening dilated sufficient to admit the finger and the point of an irrigator; the abscesses should then be washed out with a three per cent. solution of carbolic acid till it flows clear, the walls between the internal abscesses being broken down by the finger, and drains being placed in various openings. An antiseptic bandage is then applied. It is needless to say that anæsthetics are required.

As a consequence of mastitis, fistulæ in the breast are common and may continue many months. The usual treatment of these is to cauterize them with nitrate of silver and inject strong or weak solutions of carbolic acid or iodine. Some can also be remedied by drainage and compression.

### PROF. FORDYCE BARKER, M. D., NEW YORK.

This author endeavors to abort the abscess by *tincture of iodine* painted over the inflamed breast.

If unsuccessful in this he applies, over the breast, bread and milk or linseed meal poultices as hot as can be borne. Usually he prefers warm water dressings made by soaking two folds of lint in warm water, and these covered over by oiled silk.

He denounces the routine practice of rubbing the breast in mastitis as absolutely pernicious.

As soon as the abscess points and the fluctuation can be detected, it should be opened in the most dependent point, carefully avoiding, however, the areola.

To relieve pain and procure rest, he gives ten grains of Dover's or Tully's powder.

When there is an epidemic or endemic tendency, he avoids all depressing agents and gives full doses of quinine.

In the treatment of the sub-glandular form the same general principles should govern us as to constitutional measures, as in the subcutaneous variety.

He has no confidence in any topical treatment. The sole remedial measure of value, is to secure the early discharge of the pus by incision. If the conditions of the case will admit of an election, the opening should be made at some inferior point in the circumference of the breast, so as to prevent secondary inflammation of the glandular structure or of the subcutaneous areolar structure. Sometimes the signs of sub-glandular abscess existed, but no fluctuation; he has detected the presence of pus by lifting up the gland from the thorax and passing between them an exploring needle. He then makes a sufficiently large incision with a long tenotomy knife. But if the abscess point on the anterior surface, then the opening must be made where the fluctuation exists, and care must be taken to prevent its closure before the pus is all discharged, by the insertion of a tent.

Glandular inflammation or mammary adenitis presents two types; one rapid in its course, in the other the inflammatory processes are in tardy succession. In the former, resolution may be secured in a month; in the other, the period of several months may be required.

The first requires vascular sedatives, saline laxatives, anodynes and an antiplogistic regimen; while in the other, tonics, stimulants and nutritious diet are indicated. Nursing must be forbidden, as the pain and excitement thereby produced will aggravate the inflammatory condition. If, however, the secretion of milk be active, accumulation of this fluid must be avoided, the breast must be disgorged by artificial means. Rub the breast with the hand lubricated with sweet oil until the breast is soft and all nodulated indurations have disappeared. To prevent the return of the lacteal engorgement, he then covers the breast with the extract of belladonna, softened with a little glycerine.

If these means do not secure resolution, the abscess must be opened when the presence of pus is determined. Then by adhesive straps applied so as to support the breast and firmly compress it from circumference to the centre, he secures the relief of engorgement of other lobules, the removal of indurations, the prevention of purulent infiltration into the adjacent areolar tissue, and the formation of obstinate fistulous sinuses.

PROF. W. S. PLAYFAIR, M. D., LONDON,

Urges that much may be done to prevent abscess by removing engorgement of the lacteal ducts when threatened, by gentle hand friction with warm oil. Combat feverishness by gentle salines, minute doses of *aconite*, and large doses of *quinine*, and relieve pain by opiates. Confine the patient to bed, and support the breast by a suspensory bandage. Warmth and moisture are best to relieve local pain, as hot fomentations, light linseed meal poultices, or bread and milk; and the breast may be smeared with extract of *belladonna* rubbed down with glycerine, or the belladonna liniment may be sprinkled over the poultices. Generally the pain produced by nursing is so great as to prevent the child being put to that side, and the tension must be relieved by poultices. When pus forms, remove it as soon as possible; nothing is to be gained by waiting till it nears the surface; delay leads to greater spread of the disease.

The antiseptic method of operation should always be employed, as thus, in place of weeks or months, the abscess will be closed in a few days. Mr. LISTER'S method is so perfect that no more can be desired. "A solution of one part of crystallized carbolic acid in four parts of boiled linseed oil, having been prepared, a piece of rag from four to six inches square is dipped into the oily mixture, and laid upon the skin where the incision is to be made. The lower edge of the rag being then raised, while the upper edge is kept from slipping by an assistant, a common scalpel or bistoury dipped in the oil is plunged into the cavity of the abscess and an opening about three-fourths of an

inch in length is made, and the instant the knife is withdrawn, the rag is dropped upon the skin as an antiseptic curtain, beneath which the pus flows out into a vessel placed to receive it. The cavity of the abscess is firmly pressed, so as to force out all existing pus as nearly as may be (the old fear of doing mischief by rough treatment of the pyogenic membrane being quite ill-founded); and if there be much oozing of blood, or if there be considerable thickness of parts between the abscess and the surface, a piece of lint dipped in the oil is introduced into the incision to check bleeding and prevent primary adhesion, which is otherwise very apt to occur. The introduction of the lint is effected as rapidly as may be, and under the protection of the antiseptic rag. Thus the evacuation of the original contents is accomplished with perfect security against the introduction of living germs. This, however, would be of no avail unless an antiseptic dressing could be applied that would effectually prevent the decomposition of the stream of pus constantly flowing out beneath it. The following may be relied upon as trustworthy: about six teaspoonfuls of the above-mentioned oil are mixed with carbonate of lead to the consistence of a firm paste; it is, in fact, glazier's putty with the addition of a little carbolic acid. This is spread upon a piece of common tin-foil, about six inches square, so as to form a layer about a quarter of an inch thick. The tin-foil is placed upon the skin so that the middle of it corresponds to the position of the incision, the antiseptic rag being removed the instant before. The tin is fixed securely by adhesive plaster, the lowest edge being left free for the escape of the discharge into a folded towel placed over it, and secured by a bandage. The dressing is changed once in twenty-four hours, but if the abscess be large, it is prudent to see the patient twelve hours after it has been opened, when, if the towel be much stained with discharge, the dressing should be changed to avoid subjecting its antiseptic virtues to too severe a test. After this, one daily dressing is enough. The changing of the dressing must be done as follows: A second piece of tin-foil is spread with the putty, a rag is dipped in the oil and placed on the in-

... is applied.
... closes."
... methodical strappi
... afford steady su
... be best. The sin
... of iodine or other
... stimulants, iron and

... M. D., DUBLIN.

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... convenient and simpl
... a wooden bowl in
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... be continued in dos
... induce slight nausea, and
... are mitigated, and
... and fluid. If an abs
...

... PHILADELPHIA,

... the use of a few

sleep. Dr. P. believes that rubbing the breast is an irrational process, and that milk accumulated in the breasts is not injurious. It is not a cause of mastitis. He would delay opening the abscess when formed, and the popular idea that an abscess should "be ripe" before it is opened, is not entirely without foundation. He waits until the pus has approached the surface, and is almost ready to open spontaneously.

Where sinuses form, carry a stick of nitrate of silver to the bottom, and leave it there, or inject iodine, sulphate of zinc, or copper.

Q. C. SMITH, M. D., CALIFORNIA.

345. ℞. Olei lini, f.℥ iv.
Chloral hydratis, ℥ ss. M.

Powder the chloral very fine, then mix it thoroughly with the oil. Apply, spread thickly, on a piece of soft woolen flannel, a little larger than necessary to cover the breast, with a central opening through which the nipple may protrude.

Apply as *warm* as can be borne, and keep warm whilst it remains applied by warmed sacks of chamomile flowers or hops. The plaster should be renewed every four to six hours, until all pain, swelling and induration are relieved. (*Pacific Medical Journal*, May, 1878.)

In *acute mammitis*, a number of observers have reported striking success with the *poke root:*

346. ℞. Fluidi extracti phytolaccæ, q. s.
Twenty drops every three hours.

Others have seen benefit from:

347. ℞. Tincturæ belladonnæ,
Tincturæ digitalis, āā f.℥j. M.
Ten drops every three or four hours.

In *chronic mammitis*, Prof. HUNTER MCGUIRE, M. D., of

Richmond, Va., condemns (*Virginia Medical Monthly*, September, 1875,) the severe and needless practice of slitting up the sinuses, or of injecting them with stimulating fluids. Nearly every case can be cured by *proper bandaging* with adhesive plaster.

Cut the plaster into strips from four to six inches in length, and from a half to three-quarters of an inch in width, according to the size of the breast. After warming the plaster, apply one end of a strip to the circumference of the gland, near the axilla. Take another strip of the same length and width, and fasten its end to the inner circumference of the breast, near the sternal bone. The ends of the two strips of plaster thus applied are held in place by an assistant, while the surgeon takes the free extremities of the strips, and drawing them toward each other, that is, drawing the breast from its circumference towards its centre, crosses the strips and fastens them. Two more strips are then applied just below, and lapping slightly the first two pieces. Continue in this way till the whole breast is covered (somewhat upon the same principle and manner that we use strips in an indolent sore on the leg), leaving the nipple and fistulous orifices uncovered. A piece of moistened lint is placed over the sinuses to catch the pus which escapes.

ASHBURTON THOMPSON, M. D., LONDON,

Speaking of mammitis (*Medical Times and Gazette*, January, 1875,) mentions two modes of treatment, (1) the administration of *tincture of aconite*, and (2) the total abstention from fluids during the necessary number of days. By giving minim doses of aconite every hour, he had succeeded in cutting short inflammations of the breast which there was no doubt would otherwise have run on to suppuration very frequently; indeed, in three cases out of four. In cases of still-birth he had hitherto found abstention from fluids sufficient in every case to avoid every kind of mammary disturbance. Ice was allowed in moderate quantity, and no other fluid, from the time of delivery until the

fourth or fifth day, when the breasts generally return to their normal state of quiescence. The deprivation of fluid caused but little distress.

JOHN B. C. GAZZO, M. D., THIBODAUX, LA.,

In *Med. and Sur. Reporter*, May 6th, 1876, gives his treatment as light diet, alteratives, and tonics, a compress moistened with the linimentum ammoniæ iodidi et chloroformi applied to the breast as high as the axillæ, carefully enveloping the diseased mammæ, covering the compress with oiled silk, and keeping the whole in a suspensory bandage; during the first day renew the application once in two or three hours. This proceeding must be repeated every day until the swelling disappears, which is, usually, the second or third day. The liniment of chloroform and iodide of ammonia should be applied the moment that pain and engorgement of the mammary glands manifest themselves; it will then act as an abortive in suppressing incipient pain, and thereby prevent the inflammation which threatens the mammary structure. The inflammatory period of the mammary is not only shortened, but the entire duration of the disease is diminished by at least one-half. After the large, heavy and inflamed mammæ become perfectly flaccid, completely cool, and the flow of milk begins anew, allowing of the freest handling, omit the application. The only inconvenience attending it is the irritation produced upon the skin; this, however, is more than compensated for by the derivative action of the iodide of ammonia and chloroform upon the inflamed breast, which will very often, in all probability, prevent abscess and suppuration.

In addition to appropriate medical remedies, the following prescriptions were employed with the happiest results; the first, an excellent detergent and purifier of the blood, preventing the formation of matter within the glandular system; and the second, a tonic in restoring the mucous membranes:

| | | | |
|---|---|---|---|
| 348. ℞. | Potassii chlorat., | ʒ ij. | |
| | Aquæ destil., | f. ʒ viij. | |
| | Acidi. hydrochlorici, | gtt. xxx. | |
| | Syrupi aurantii, | f. ʒ iij. | M. |

SIG.—One tablespoonful every two hours.

| | | | |
|---|---|---|---|
| 349. ℞. | Cinchonæ sulph., | ʒ ij. | |
| | Quiniæ et ferri citras., | ʒ iij. | |
| | Tinct. ferri chloridi, | f. ʒ ij. | |
| | Syrupi sennæ, | f. ʒ vij. | M. |

SIG.—One tablespoonful three times a day, after diet or meals.

The liniment of iodide of ammonia is prepared as follows:

| | | | |
|---|---|---|---|
| 350. ℞. | Iodinii, | ʒ iij. | |
| | Ammoniæ iodidi, | ʒ ij. | |
| | Chloroformi | | |
| | Olei olivæ, | āā | f. ʒ x. |
| | Glycerinæ, | | f. ʒ v. |

Dissolve the first two by rubbing in the chloroform; then add the olive oil and glycerine.

C. B. KEIPER, M. D., INDIANA.

The first fifteen years of practice he used belladonna poultices, and so forth. Now and then he would have a suppurating breast; and in cases that did not suppurate, it would require from six to ten days to subdue the inflammation.

In the last fifteen years he made no other applications than cold water and *muriate of ammonia;* two ounces of *muriate of ammonia* to a half gallon of cool water. Where ice cannot be had, put the solution in a tin bucket, and place this bucket in another one of cool water, so as to keep it at a low temperature (in city practice ice may be employed); then take two pieces of cotton goods, each about twenty inches square, and double each one four times, and then cut a hole in the centre about two inches in diameter, so as to protect the nipple, and dip these in the solution, and apply to the parts affected; removing every twenty minutes, to immerse anew in the solution. This continue till the inflammation is subdued, which generally requires from one to three days.

### HUGH MILLER, M. D., OF GLASGOW.

In cases where acute congestion occurs in the mammary glands when commencing to secrete, this author (*Edinburgh Med. Journal*, December, 1877,) employs, with great success, a preparation of *belladonna*. It is an alcoholic extract of double the usual strength, kept fluid by collodion. Camphor is combined with it for the purpose of aiding to arrest the natural mammary secretion. This preparation is painted on the breasts much in the same way that you would use blistering fluid. No rubbing in is necessary. The fluid dries quickly, is much more cleanly for the patient, has a less offensive odor than the ointment, and in his experience, it is more reliable in its action.

This liquid preparation is painted over the affected parts of the breast night and morning, until the acute symptoms give in. Indeed, it can only be of service as a good local sedative when the free and frequent application of it to the affected part has been persevered in until decided results are secured. He has used this preparation with very satisfactory results. Whether the inflammatory irritation accompanying the onset of the lacteal secretion had for its exciting cause exposure to cold, inflamed nipples, or obstruction in the lacteal ducts, the preparation has always seemed to be of value. He has also used the preparation beneficially by applying it to both breasts every day when the mother did not intend to suckle her child; and is satisfied that it may be safely relied upon for restraining the secretion of milk, and acting on the walls of the arterioles so as to prevent engorgement. It has the advantage over the old plan of evaporating lotions, in that it is more cleanly, and is more comfortable to the patient. When the remedy is employed to prevent the secretion of milk forming at all, it is best to begin applying the liquid immediately after the birth of the child.

### EDGAR KURZ, M. D., TÜBINGEN.

In the lying-in hospital at Tübingen, this author treated the very frequent cases of commencing mastitis in the following

manner: When the breast is tense with milk and becomes hard and sensitive, it frequently suffices merely to restrict the diet of the patient, and to remove the superabundant milk by nursing several children, or drawing it out with one of the various appliances devised for the purpose, or by gently expressing it. When the affection has advanced a step farther, and the breast is much swollen and lumpy, and the skin reddened, and suppuration appears imminent, it is necessary to adopt energetic measures. The diet is still more restricted, laxatives are given, the breast is securely bound up by a cloth, without, however, exerting compression, which is suitable only for chronic cases, or the residual nodosity following acute mastitis. The *main point* of the treatment is the *application of cold*, which in light cases consists merely in iced compresses; in severe cases in the unremitting application of a bladder filled with ice. The often intolerable pain, which is increased by compression, yields rapidly to this treatment; the tension decreases, suppuration is prevented, and in a few days even mastitis may be cut short in this manner. During two years of this treatment, not one case of mastitis terminated in suppuration, whilst under compression it frequently occurred.

PROF. F. WINCKEL, M. D.,

Applies dry heat if very acute pain persists after the use of compresses of cotton batting, cold compresses, or the ice-bag. When headache is severe and the tongue coated, he gives large doses of *iodide of potassium*. To reduce the thickness of the skin and expedite the evacuation of pus, he paints with iodine. Evacuate pus promptly.

When a portion of the gland is tender, swollen, and the surface red, give the breast as much rest as possible, by less frequent nursings, or entire cessation on that side. Use compresses, wet with lead-water, night and day, renewing them every few minutes, supporting the breast. Keep the bowels free. Continue until the nodules disappear, or alternate the lead with tincture of iodine, if there is reason to believe that an abscess is forming.

Pointing of pus is thus hastened. A plaster of Paris bandage applied to the breast is excellent after evacuation of pus, as it insures uniform compression of the gland. Change it every two or three days. Other methods have been employed, but this should completely supersede the use of warm poultices.

To remove any lacteal nodes, mercurial ointment or iodide of potassium may be rubbed on, or the parts covered with emplast. saponis., emplast. cicutæ, or emplast. melliloti, and iodine, given internally, the child having been weaned.

### J. L. POWERS, M. D., IOWA.

This writer, in the *Medical Brief*, October, 1878, uses tobacco salve spread upon drilling, the size of the breast, with a hole in the centre for the nipple.

Internally, when inflammatory symptoms are marked:

| | | | |
|---|---|---|---|
| 351. ℞. | Spt. ether. nit., | f. ℥ ss. | |
| | Tr. veratri virid., | f. ℥ ss. | |
| | Aquæ, | f. ℥ iij. | M. |

Teaspoonful every hour or two, until it produces a sedative effect, and then less frequently.

With concentrated tincture of phytolacca, 15 to 20 drops, and this used persistently, he believes an abscess may be avoided.

### RÉSUMÉ OF REMEDIES.

*Acetum.* The application of a cloth wrung out in hot vinegar, which is then covered with a bowl moderately heated, is a popular means of aborting threatened inflammation of the breasts.

*Aconitum*, in minim doses of the tincture, is recommended by Dr. THOMPSON. (P. 504.)

*Ammonii Murias*, as a resolvent local application, has been found very efficient. (P. 506.)

**Belladonna.* In recent induration and inflammation of the breasts, remarkable effects are produced by belladonna in arresting the secretion of milk. Either as plaster or ointment, or also internally, its use should not be omitted.

*Chloral* is applied locally by Dr. Q. C. SMITH. (F. 346.)

*Chloroformum.* Dr. S. W. GOULD, of Indiana, states in the *Med. and Surg. Reporter*, August 10th, 1878, that in acute mammitis he has for ten years used the following without having occasion to lance a single breast:

352. ℞. Chloroformi,
Glycerinæ, āā equal parts. M.

Shake thoroughly, apply quickly every hour, and cover with oiled silk.

*Conium.* In chronic engorgement or hyperplasia of the breasts, the prolonged use of conium internally has a decided influence in reducing the size.

*Digitalis,* in inflammatory states, may sometimes be advantageously combined with belladonna. (F. 344.)

*Ergota* moderates the secretion of milk, and has been used to prevent mammary abscess and engorgement of the breasts during weaning.

*Iodinii Tinctura,* in the chronic forms of engorgement, is a valuable resolvent.

*Petroselinum.* Freshly bruised parsley leaves are a popular remedy in commencing mammary inflammation at the beginning of lactation.

**Phytolacca Decandra* is known popularly as the "garget weed," and is extensively used for garget (mammary inflammation) in cows. Considerable evidence has been adduced that it possesses equal value in the human female. It is given in doses of gtt. xx. of the fluid extract of the root every three or four hours. (*Am. Jour. Med. Sciences*, 1873, p. 275; *Med. and Surg. Reporter*, January, 1875.) Dr. J. G. ALLEN states (*Am. Jour. Obstetrics*, October, 1879,) that it is not of value where the mammitis begins at the nipple or only involves small lobes of the gland; but where the whole or a large portion is swollen and congested, and in the condition of congestion that sometimes results from an attack of ephemeral fever, the phytolacca is almost a specific.

*Plumbi Acetas.* Dr. HUEBNER, of Dresden, recommends the constant application of lukewarm lead-water in com-

presses, followed, if required, by strapping of the breast and free incision.

*Plumbi Iodidum.* The discutient powers of this agent may be advantageously called into play in chronic engorgement of the mammary glands.

*Stramonium.* The fresh leaves of stramonium, made into a cataplasm and applied externally, have been found successful for discussing indurated lacteal glands in the breasts of nurses. (PHILLIPS.)

*Tabacum,* in the form of ointment, gr. xxx. to lard ʒj., has long been used in some parts of this country as a domestic application to inflamed and "caked" breasts.

GENERAL MEASURES.

*Cold.* Some writers are very positive in praise of cold applications in threatened inflammation of the mammary gland. Pounded ice is placed in a bag and laid directly upon the gland, to be renewed from time to time. The pain and swelling are said to abate promptly, "within an hour," and in a few days the inflammatory action has quite disappeared. (See p. 508.)

*Compression* is highly praised by most authorities (See pp. 506, 507, 508, 509.) Dr. KOENING says that in *mammary lymphangitis* it is "infallible." The method which he employs (*London Med. Record,* April, 1877,) is the following: The diseased breast is covered with a layer of cotton-wool, and a bandage is applied which is known in minor surgery as the bandage of Mayor, or the triangular bonnet of the breast. The form of the bandage is a triangle, a yard in length from one extremity to the other, and fifty centimetres (nearly twenty inches) from the apex to the base. The base of the triangle is placed obliquely under the diseased breast, then one of its extremities is directed under the corresponding armpit, and the other over the opposite shoulder, and there united behind the shoulder-blade. The apex of the triangle is then lifted in front of the diseased breast, it is carried over the corresponding shoulder, and firmly fixed behind.

Sometimes a linseed poultice is at the same time applied on the inflamed part.

The effects of treatment thus arranged are almost marvelous; the pain is immediately calmed, the inflammatory redness, and the œdema are diminished at the end of a very short time.

*Heat* is more popular than cold as a means to effect resolution. Hot vinegar, lead-water, etc., warm poultices, heated bowls or plates, etc., are familiar applications, and often successful.

# MAMMARY TUMORS.

## DIAGNOSTIC POINTS.

The diagnosis of mammary tumors is confessedly difficult. We give from various surgical authorities a few points to serve as diagnostic landmarks.

1. *The tumor presents itself as a small nodule in the breast.*

It may be merely a benign chronic mammary tumor (adenoma), or the beginning of sarcoma, or scirrhus.

| *Adenoma.* | *Sarcoma.* | *Scirrhus.* |
|---|---|---|
| Patient under thirty and single. | Patient any age. | Patient over thirty. |
| Tumor dense, but elastic and movable under the skin, and movable on the deeper part of the breast. | Tumor elastic and movable, but rapidly involving the surrounding tissues. | Tumor hard, and attached to the deeper part of the breast, though at first movable beneath the skin. |
| Pain, if present, of a neuralgic character, and worse at the menstrual period. | Pain not severe as a rule. | Pain severe, and of a sharp, lacerating character, and shooting down the arm. |
| Skin and lymphatics never involved. | Skin eventually involved but no lymphatic enlargement. | Both skin and lymphatics involved early. |
| Grows very slowly, and varies in size. | Grows very rapidly, and apt to recur locally. | Grows rapidly, except in old people. |
| Nipple not retracted. | Nipple often exudes fluid. | Nipple often retracted. |
| No family history. | No family history. | Often hereditary. |

Of these signs, the enlargement of the lymphatic glands of the axilla and the neck is the most important point in the diagnosis of scirrhus.

Adenoma generally occurs in the breasts of young, healthy women, during their period of developmental perfection. Among married women it often occurs among those who are suckling. It usually grows slowly, and as it enlarges, pushes the breast aside; it never infiltrates it. It may grow to a great

size, and stretch the skin even to the point of rupture; but the skin is never infiltrated, nor the tissues beneath. The tumor is encapsuled, and usually movable, and can be readily turned out. It is never associated with any secondary glandular enlargement.

2. *The tumor is elastic.*

Its contents should be drawn to the extent of a drop or two by a needle, and examined. If the fluid proves to be:

(*a*) *Pus*, the case is one of abscess.

(*b*) *Milky fluid*, it is galactocele.

(*c*) *Clear fluid*, it is simply cyst.

(*d*) *Dark fluid*, it is compound cyst or sarcomatous cyst.

(*e*) *Clear fluid containing microscopic hooklets*, it is hydatid.

3. *The tumor is large, elastic, and rapidly growing.*

It may be:

| *Encephaloid Cancer.* | *Benign Cystic Growth.* |
|---|---|
| No cysts present. | Cysts present. |
| Lymphatic enlargement in the axilla and neck. | No lymphatic enlargement. |
| Skin infiltrated and thickened, often with small flattened nodules. Veins enlarged. | Skin stretched and thin, so as eventually to give way. Veins about natural. |

*Hysterical Breast.* This is a rather rare affection. Its invasion is often sudden, and the malady rapidly reaches its maximum of intensity. It is ushered in by a sense of uneasiness and formication, which is soon transformed into lancinating pains, becoming almost intolerable. In some cases the skin is changed, in others it becomes red, hot and swollen, and remains so till the end of the exacerbation. In the meanwhile, the gland enlarges to an enormous size. The ovaries are sometimes in sympathy. This condition lasts from one to three days. These troubles generally coincide with the period of menstruation or an hysterical attack.

The breast is subject to various other forms of tumors, some of which are dependent upon disorders of the secretion, and others on inflammation and its results. As the distinction between

these is difficult, and yet of great importance in practice, we quote on the two following pages a comprehensive table of the differential diagnostic symptoms, as arranged by Dr. D. S. ADAMS, in the *Transactions of the Medical Society of the State of New Hampshire*, 1879:

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*and is not to be removed from the Library Room by any person or under any pretext whatever.*

| | Connection with *Milk.* | *Chronic Enc't Abc's.* | *Adenoma.* |
|---|---|---|---|
| | During the child-bearing period, and the result of pregnancy | 1. During the child-bearing period usually, and most commonly the result of pregnancy. | 1. Majority of cases under the age of 30. |
| | 2 Some dull pain sometimes; not common | 2. No. pain. | 2. If painful, pain dull and most severe at catamenial period. |
| | 3. System considerably disturbed. | 3. A System not disturbed. | 3. System not much disturbed. |
| | 4. Breast very much enlarged. | 4. Breast not much enlarged. | 4. Breast slightly enlarged. |
| | 5 Local circulation active in both breasts | 5. Local circulation some increased in both breasts. | 5. Local circulation some increased in the breast affected. |
| | 6 Tumor large and lobulated. | 6. Usually small and irregular in shape. | 6. Tumor small and nodulated |
| | 7 Stony hard. | 7. May give an elastic feel, otherwise hard. | 7. Moderately hard. |
| | 8 Single. | 8. Single | 8. May be single or multiple. |
| | 9 Nipple always connected with tumor | 9. Nipple may or may not be connected with the tumor; usually is. | 9. Nipple always connected with tumor. |
| | 10. Not freely movable. | 10. Not freely movable. | 10. Freely movable. |
| | 11 Skin disturbed over it. | 11. More or less œdema of the areola. | 11. Skin normal, unless the tumor has reached considerable size, when it becomes stretched over the tumor. |
| | 12 Growth rapid to a certain size, then stationary | 12. Growth slow. | 12. Growth slow under the age of 30; after that, rapid. |
| | 13 Nipple usually retracted or imbedded in the breast | 13. Nipple usually flattened or retracted. | 13. Nipple projects. |
| | 14 Surrounding glands never implicated but may be somewhat swollen. | 14. Surrounding glands may be some swollen. | 14 Surrounding glands never implicated. |
| | 15 Superficial veins large in both breasts | 15. Superficial veins may or may not be enlarged. | 15 Superficial veins usually enlarged. |
| | 16. Puncture.—Cheesy mass or cream | 16 Puncture —Pus. | 16. Puncture.—Solid. |
| | 17. Microscope.—The same as in galac- | 17. Microscope.—Pus corpuscles. | 17. Microscope.—Epithelial cells if taken from the interior of the acini; otherwise, may get connective issue. |

| *Soft Carcinoma.* | *Hard Carcinoma* | *Sarcoma.* | *Primary Cyst* |
|---|---|---|---|
| 1 Very rare under the age of 30 | 1 Very rare under the age of 30. | 1 Majority in patients over 30. | 1 At any age above puberty Majority under 30 |
| 2 May or may not be painful Is not usually painful till skin is implicated then pain severe and cutting running to the shoulder and down the arm | 2 Usually not painful till skin is implicated then pain severe and cutting, or stabbing running up to the shoulder and down the arm. | 2. May or may not be painful | 2. Not painful usually |
| 3 System considerably disturbed | 3. System not much disturbed | 3 System usually disturbed some. | 3. System not disturbed |
| 4 Breast some enlarged and enlarges rapidly | 4. Breast normal at first. | 4 Breast slightly enlarged. | 4 Breast appears normal |
| 5 Local circulation some increased in the breast affected | 5 Local circulation apparently normal | 5. Local circulation slightly increased in breast affected | 5 Local circulation normal |
| 6 Tumor quite a size, irregular and not well defined | 6 Tumor small and smooth or nodulated | 6. Tumor quite a size, and irregular | 6 Tumor small and may be nodulated. |
| 7 Usually soft, with a doughy feel. | 7 Tumor hard | 7 Tumor a little soft | 7 May give an elastic feel otherwise, hard and may be finely nodulated |
| 8 Single, but lobulated feel, may give the feel of a multiple tumor but you cannot roll one on the other | 8. Single. | 8. Usually single | 8 Frequently multiple and when so, can readily roll one tumor on the other. |
| 9 Nipple always connected with tumor | 9 Nipple always connected with tumor | 9 Nipple may or may not be connected with tumor. | 9 Nipple may or may not be connected with tumor |
| 10 Freely movable at first Soon adherent | 10 Freely movable at first. | 10. Not freely movable | 10 But little movable when deep seated. |
| 11 Skin normal at first, but becomes implicated early | 11 Skin normal till late in disease. | 11 Skin normal. | 11. Skin normal |
| 12. Growth rapid | 12 Growth slow | 12. Growth usually rapid | 12. Growth slow, and may remain small for years, then grow very rapidly May have a vegetation spring from its wall forming the compound cyst |
| 13 Nipple projects at first, but soon becomes retracted | 13 Nipple normal at first; may or may not be retracted later | 13. Nipple may or may not be retracted | 13 Nipple may or may not be retracted; is not usually |
| 14 Surrounding glands soon implicated as the growth is rapid | 14 Surrounding glands not implicated till late in disease | 14 Surrounding glands never implicated | 14 Surrounding glands never implicated |
| 15 Superficial veins enlarged early | 15 Superficial veins not enlarged till late in disease | 15 Superficial veins may or may not be enlarged. | 15 Superficial veins may or may not be enlarged |
| 16 Puncture — Tumor soft, but no discharge | 16 Puncture — Solid. | 16 Puncture.—Solid | 16 Puncture — Fluid |
| 17 Microscope. — Epithelial cells arranged in alveoli with no connective tissue separating the cells The alveoli separated by well-marked connective tissue bundles. | 17 Microscope The same as soft, except more connective tissue and less cells The arrangement of cells the same The cells may break down so as to leave small granules in the alveoli In this case the lining epithelial character is lost. | 17. Microscope — Spindle shaped cells are characteristic It be round-celled the cells resemble epithelial cells but are not so distinctly arranged in alveoli and have connective tissue ramifying all through between the cells | 17 Microscope — If primary, the walls are simple connective tissue If secondary, the walls same character as tumor from which it was formed |

PROF. SAMUEL D. GROSS, M. D., PHILADELPHIA,

Considers the great object of the constitutional treatment in carcinoma, as the maintenance of the general health as near the normal as possible, and the best means are a proper regulation of the diet, bowels and secretions, the avoidance of pain, plenty of sleep, and a contented mind. The diet should be that which agrees with the stomach, and affords the best nourishment in the smallest compass. The plethoric should have farinaceous food principally, while the anæmic require meat, and even malt liquors or stimulants.

Pain may be allayed by anodynes in suitable doses. A hot, dry skin requires pulvis ipecacuhanæ comp. and a few grains of blue mass; change of air and scene, as to the sea-coast, are often beneficial. Specifics fail to cure, though they often improve the health. Of these we have quinine, bark and iron, as the best. *Arsenic* is useful, and the best form is the iodide, one-sixteenth of a grain three times a day.

The topical treatment should be suspension of the organ, and the removal of all pressure. Leeches may be applied when there is inordinate vascular excitement, especially if the patient is plethoric, and the flow of blood may be encouraged for some hours by cloths wrung out of hot water. Afterwards the parts may be kept wet with lotion of acetate of lead and opium. Light emollient poultices are useful, and may be medicated with lead, opium, dilute tincture of iodine, etc. Anodyne plasters of opium, cicuta, stramonium and belladonna, are comforting. The soap, compound galbanum and De Vigo's plaster, are useful if well sprinkled with morphia.

When ulceration occurs, the indications are to moderate discharge, prevent hemorrhage, relieve pain, allay fever, and sustain the strength. Here we may use subsulphate of iron, anodynes, Labarraque's solution, or permanganate of potassa, frequent ablutions and good diet, with stimulants. If there is copious hemorrhage, acupressure may be employed.

Excessive swelling of the arm may be relieved by the roller

bandage and steady elevation of the limb. [The strong elastic bandage will in these cases be found of very great value.—Ed.]

Itching of the skin may be relieved by zinc ointment and Goulard's extract.

*Mammary hypertrophy* may be met by iodine, externally and internally; gentle and protracted ptyalism; the steady and persistent exhibition of chloride of ammonia, 10 to 20 grains three times a day; the relief of weight and tension. Extirpation must be employed if the tumor is large and the health is failing.

*Milk tumors* should be injected with a stimulant, as dilute tincture of iodine, and the seton or tent may be employed, with care that the inflammation does not run too high. When the tumor is solid, it may be excised.

[We have seen a number of such tumors, and have invariably advised non-interference, and have never known bad results to follow.—Ed.]

*Serous cysts* will sometimes disappear under the steady use of discutients, as a strong solution of chloride of ammonia, or equal parts of alcohol and spirit of camphor, with a small quantity of Goulard's extract. Or a cure may be effected by the seton, tent, or iodine injections. When the cyst is old, large, or partially solidified, excision is necessary.

The only remedy for *hydatid* tumors is excision. Relapse does not occur.

For *fibroid* and *adenoid* tumors, sorbefacients and compression, with iodine internally, may be tried in the earlier stages; afterwards excision is the only reliable means.

## DR. SAMUEL D. GROSS, OF PHILADELPHIA.*

In small, circumscribed, mobile growths, methodical compression with pads of agaric or an air cushion holds out some hopes

* *Treatsie on Tumors of the Mammary Gland*, 1880

of success. The inunction of stimulating ointments is not only useless but liable to prove irritating.

Dr. GROSS considers the knife the best measure in all mammary malignant growths, and the earlier the better. Caustic applications are uncertain and painful. He would restrict their employment to the allaying of fœtor and the improvement of the surface of open cancers. In cases of this description he commends Esmarch's powder:

| | | | | |
|---|---|---|---|---|
| 353. ℞. | Acidi arseniosi, | | | |
| | Morphiæ muriatis, | āā | 0.25. | |
| | Hydrargyri chloridi mitis, | | 2.0. | |
| | Pulv. acaciæ, | | 12.0. | M. |

Of this, half a teaspoonful is to be sprinkled daily on the surface until a yellowish and leathery crust is formed, which on dropping off leaves a clean, granulating surface. This application is safe, painless and disinfecting, and its good effects are often striking. The paste of chloride of zinc, as usually employed, is excessively painful.

When operative interference is inappropriate, the most that that can be done is to render life endurable by relieving pain, arresting hemmorrhage and diminishing fœtor.

To relieve pain, hypodermic injections of morphia combined with a minute quantity of atropia should be used. When the pain is increased by the rapid growth of the tumor, nothing mitigates it so rapidly as:

| | | | |
|---|---|---|---|
| 354. ℞. | Plumbi acetatis, | gr. xv | |
| | Aquæ, | ℥j. | M. |

For a local application.

When the breast is hot, tense and tender, ice-bags give great relief. When the active symptoms have subsided, these measures may give way to the following application:

| | | | | |
|---|---|---|---|---|
| 355. ℞. | Extracti belladonnæ, | | | |
| | Extracti stramonii, | āā | ʒj. | |
| | Extracti petrolei, | | ℥j. | M. |

When hemorrhage resists cold and the ordinary applications, it may be checked by pressing upon the part a bit of cotton which has been soaked in Monsell's solution and dried.

As a deodorizer, the following, which also possesses the merit of assuaging pain, will be found useful ·

356. ℞. Chlorali hydrat., gr. v
Unguenti petrolei, ℥j. M.

This is also an excellent remedy after dead parts have sloughed away.

Sloughing tumors should be covered with a slippery-elm poultice medicated with balsam of Peru, permanganate of potassa, chloralum or girondin.

### PROF. JAMES Y. SIMPSON, M. D., EDINBURGH,

In speaking of *carcinoma* of the *mamma*, says the two serious objections to the knife are, the probability of a relapse, and the danger of the operation. Hence the treatment by *caustics* requires to be considered; these give less pain, and the wound heals more readily than that left by the knife. Nor is the result less complete, as "there is good reason to believe that the modifying influence of the caustic probably sometimes extends also to cells and structures which may be wholly, or only in part, affected and morbidly altered and which lie beyond the line of immediate extirpation." Caustics may be applied to all forms of cancer. The remedies from which the best have been obtained, are the *chloride of zinc* used in the form of a paste with starch or flour, the *pernitrate of mercury* and the *sulphate of zinc*. The latter, when dried and powdered, is a very powerful caustic. Prof. SIMPSON applied it in several cases with complete success. To apply it to the base, or into the interior of a tumor, it may be mixed with sulphuric acid.

The greatest advance in this treatment has been in the more clear and practical views as to the mode of using the caustics,

their introduction into the centre or the base, so as to produce quickly mortification of the entire mass. With the sulphate of zinc, an ordinary quill pen may be used. Saturate strong sulphuric acid with the zinc dried and powdered; dip the pen into it, and lay the caustic in a number of lines across the tumor. Soon the skin is killed in the course of these lines; then scratch the filled pen along these lines, and the skin is readily cut through. Fill the fissures with the paste, and every day or two renew it, thus cutting down. In the first application, he usually made a fissure of a fourth or three-eighths of an inch in depth. Thus, in five or six days, a good-sized tumor may be removed. Dress with black wash, chloride of zinc, sulphate of zinc, or nitrate of silver. The healthy skin at the edge of the mass usually granulates, and is partially cicatrized before the dead tumor is separated.

MAISONNEUVE, of Paris, recommends "caustic arrows;" these are pieces of paste of chloride of zinc, in the form of small cones, sharpened to facilitate their entrance into the mass. He usually punctures the tumor all around, and introduces an arrow deeply into each wound. Or, he introduces, parallel to each other, a number of flattened pieces of the paste.

Perhaps, as these cause severe hemorrhage, arrows of chloride of zinc and perchloride of iron might answer better.

The injection of a sulphate of zinc lotion, or of some other equally powerful caustic, by means of a small syringe, has been tried, but not with the best results as yet. Perhaps, if a larger tube were used, and such articles as the perchloride of iron thrown by one opening, but at different angles, into the mass, more beneficial results might be obtained.

# MAMMARY NEURALGIA (MASTODYNIA.)

Occasionally during lactation, the mammæ are the seat of intense neuralgia, compelling the woman to abandon nursing unless relieved. For this condition Dr. FORDYCE BARKER has found *quinine* in full doses twice a day an efficient remedy.

It is not uncommon in the early months of pregnancy, and also in non-pregnant women of a hysterical constitution, to find instances of neuralgic pain in the mammæ. In most of these cases, narcotic fomentations, and opium internally, will give relief. Occasionally the hypodermic use of morphia will be requisite.

TANNER speaks well of the *valerianate of iron* or of *zinc;* and also the tincture of *actea racemosa*, combined with small doses of *aconite* where there are signs of engorgement. *Cod-liver oil* has relieved some cases which have resisted all other remedies. He has found quinine chiefly serviceable where some degree of periodicity is manifest. Mental relief will always be given by calming the patient's fears as to the nature of the disease, since directly a nervous woman has pain in the breast, she usually concludes it must be due to cancer.

Dr. ANSTIE says that in some cases, discontinuance of nursing has been found necessary, but generally, complete rest, protection of the breast from air and friction, and the hypodermic injection of *morphia* will rapidly relieve. Very frequently it is the result of malnutrition, and is then readily and permanently cured by an abundance of easily digested, nutritious food. As medicaments, we may use the *tincture of chloride of iron* in full doses, and still better, combine it with *strychnia*, 10 minims of the iron to $^1/_{40}$ grain of the strychnia. Arsenic, phosphorus, and belladonna have each proved extremely useful.

## GALACTORRHŒA.

An excessive flow of milk, while very exhausting to the woman, is exceedingly liable to cause positive and permanent ill health. Many authors relate cases of insanity which were undoubtedly due to an excessive flow of milk inducing anæmia; and the anxiety of the mother to nurse her child, fearing that her increasing weakness would incapacitate her, has culminated in mania, perhaps causing her to take the life of her offspring. The milk itself is apt to be thin and watery, deficient in the vital constituents. The treatment will consist in the generous support of the woman by appropriate food, avoidance of fluids, and the use of astringent tonics. If not readily checked, and the general health shows indications of being affected, lactation may be partially or wholly suspended. *Coffee* is regarded by some authorities as capable of suppressing the supply of milk. The editor has used it for this purpose, but as this was associated with other remedies, he is unable to give its true value.

### DR. L. DE SINETY.

The general rules are to wean the child; to administer tonics and iron if the patient is anæmic; and to endeavor to recall the menses by warm, sinapized foot-baths, leeches to the vulva, etc.

Narcotics, as opium internally, or friction with liniments containing morphia, have some success. So also have compresses wet with muriate of ammonia and iodide of potash.

357. ℞. Ammoniæ muriatis, ʒ iss.–v.
Potassæ iodidi. ʒ iij
Aquæ, f.ʒ vi. M.
For local use.

Internally a combination of white agaric with the iodide gives encouraging results:

358. ℞. Agarici, gr. iv.
Potassii iodidi, gr. ij. M.
For one capsule, four or six times a day.

But the best curative procedure is systematic *compression*. The mammæ should be thickly covered with wadding so as to make a large, elastic cushion. Upon this, broad strips of adhesive plaster should be applied, passing under the arm-pit and quite around the body. It should then be crossed upon the breast sufficiently to compress firmly without too severely pressing the gland. If adhesive plaster cannot be used on account of the sensitiveness of the skin, ordinary rollers may be substituted.

### PROF. WM. LEISHMAN, M. D., GLASGOW,

Says the quantity alone may be abnormal, and only requires interference to guard the health of the mother from the unnecessary drain. This requires regulation of the woman's diet. Or in addition to the excessive quantity, the bulk may be mainly of water, thus affecting the health of child and mother. As this is believed to be associated with a phthisical tendency, it would be better to wean the child.

### C. H. F. ROUTH, M. D., LONDON.

This author considers the treatment as both dietetic and medicinal. If the woman have suffered from menorrhagia, or other habitual discharge, and is not weak, purgatives and other derivatives may be used, the breast kept cool, and the child not applied more frequently than every three hours. It is, however, generally the result of weakness; hence tonics are required, especially those of an astringent character, as oak bark, cinchona bark, and most of the vegetable infusions, while the bowels are regulated by alteratives. Along with these give good wholesome food to improve the strength of the patient aud the quality of the milk. Nutritive, but not stimulating drinks, may be allowed in moderation.

When the flow is greatly in excess, and there is danger of mischief, as inflammation or abscess, antigalactics may be necessary. Of these there are four: *iodide of potassium*, belladonna, colchicum and iron. Of the first, Prof. ROUSSET says it occasions a considerable decrease of milk, and prevents or removes milk knots, if at the same time the child is not nursed, but the milk returns if the medicine is not used longer than two or three days. The dose should not exceed 5 to 8 grains daily. The secretion of milk can almost be completely prevented, if this drug is given on the first or second day after delivery.

*Belladonna* appears to act differently according as it is exhibited. In 1829 Dr. FIFIELD, of Weymouth, used it to allay irritation of the breast. Dr. SCHNUR in 1834 employed a liniment of laurel water f. ʒ ij., sulphuric ether f. ʒ j., extract of belladonna ℈ ij., to rub the breasts to arrest milk abscess. Dr. GOOLDEN employed it, smearing the axilla and breasts freely. It entirely relieved the symptoms in several cases. Several others have been equally successful. Mr. W. NEWMAN, of Fulbeck, England, used it in cases where the suppression was desirable because of the death of the child, or the necessity of weaning, or where engorgement supervened, and abscess threatened. He employed the extract softened with glycerine, and in every case resolved the engorgement, or arrested the secretion. BERRY believes that belladonna acts primarily on the muscular fibre. The lacteal tubes, in part muscular, are thus dilated, and one of two things occurs. The milk is either absorbed, like any other effusion, by the absorbents or veins *in situ;* or, it may be drawn out. This effect is produced by the child, or by a poultice, which assists the dilatation of the external tubes. In threatening abscess, it acts as a sedative. Therefore he believes that it merely prevents accumulation. It should not be used sparingly, but freely, in the form of extract all over the breast, except the nipple and areola. Never fail to wash the nipple before applying the child.

[I can fully substantiate the views of Dr. ROUTH in regard to belladonna, having relied wholly upon it for nearly twenty years

in a large obstetric practice, and where a good extract was used and applied freely, as above, I have never known a failure. The secretion may be completely arrested in one breast for any cause, while it remains unaffected in the other. Or where abscess is feared, the free application from one to three days will positively relieve the engorgement, and nursing may continue as desired. I generally order

359. ℞. Extracti belladonnæ, ℥ ij.
Ung. petrolei, ℥ j. M.

to be rubbed freely over the whole of the breast, except the nipple and areola. In several instances I have thus produced the toxic effect of the drug, but the secretion was only reduced, not entirely arrested, while the symptoms of abscess speedily disappeared.—Ed.]

Goolden says that when milch cows eat the *meadow saffron* (*colchicum*) in the pasture, their milk is immediately dried up.

Routh believes that *iron* is certainly an antigalactic, especially if the astringent preparations are used. Mr. Stanislaus Martin, of Auvergne, noticed that drinking ferruginous waters caused the milk of animals to dry up. He tried it with a nursing woman, and the milk began to disappear. Dr. Richardson, of Tunbridge Wells, found the quantity of milk thus to be decreased in the plethoric, but where there was general debility, anæmia, it was increased.

The following is certainly effective as an antigalactic:

"Beat up the yolk of an egg to a froth, add olive oil and honey, of each two tablespoonfuls, thicken with flour to the consistence of an ointment, spread it on a rag, and lay it on the breast; change night and morning, and wash the bosom before each renewed application."

Gardner and Doutrepoint speak well of conium. Others recommend tobacco and peppermint.

Where the flow is too free by reason of relaxed fibres of the parts, etc., astringent tonics may be given, but we require other aid. Cold water may be applied two or three times daily to the

nipple, not to the breast, and very slightly r
may be brushed around the nipple, and not up
percha collodion is preferable; it constringes th
leaking is prevented; decoction of oak-bark
addition of a little gum, is a good local applic
*nux vomica* or *strychnine* may be given, with o
It strengthens muscular tone and nervous force

JOHN WM. LANE, M. D., LOND

(*Medical Press and Circular*,) for more than t
ployed the following method to prevent the se
the breasts of women who may have had still
who, after having nursed their child for a few
necessary to wean it.

It consists in taking a piece of emplastru
about ten inches square, round the corners,
centre for the nipple, then from the centre of
a straight cut toward and within two inch
having now got it ready, let the patient lie on l
being perfectly horizontal; warm the plaster
the breast, then strap one of the lower corners
the opposite one tightly upward and fix its pl
lower corner, and lastly the opposite upper one
sufficiently tight first; now take a piece of
wide and about sixteen or eighteen inches l
from below and outside the breast, across, c
nipple, and fasten the end over the clavicle; a
also be put on in an opposite direction, it bei
shoulder. Of course, in cutting the plaster
of the breasts must be taken into considerat
much difference in the size of female breasts.

RÉSUMÉ OF REMEDIES.

*Agaricus*, gr. iij. in pill, will lessen the secretic
*Alumen*, in powder, boiled in milk, is an effici
to "dry the milk."

*Atropia* has been found efficient in excessive secretion of milk.

**Belladonna* is probably the most efficient drug known to check galactorrhœa. It should be applied locally and taken internally. When a woman is subject to galactorrhœa during nursing, she should begin the application of belladonna ointment to the breasts several months before confinement.

*Caffea*, has been found effective in the editor's experience.

**Camphora* possesses well-ascertained powers of checking the lacteal secretion, and may be advantageously combined with belladonna.

*Cannabis Indica.* The volatile oil of *cannabis sativa*, employed in warm embrocations on the breasts, is said by COUTEUX to be the best of all agents to check galactorrhœa and prevent mammary engorgements.

*Colchicum.* It has been observed that cows which eat the meadow saffron have their milk dry up; Dr. KEATING, of Philadelphia, has observed a similar effect in nursing women from the administration of colchicum.

*Conium plasters* were formerly used to dry up the milk. By a prolonged use of it internally, the mammary gland has been known to become atrophied, and its secretion to have been gradually suspended. (STILLÉ.)

*Ergota* has a positive influence in galactorrhœa.

*Iodinium*, in small and repeated doses, will check excessive lactation. As an ointment to check the secretion of milk, Dr. J. L. LUDLOW, of Philadelphia, recommends:

360. ℞. Iodinii, gr. x.
Camphoræ,
Extr. belladon., āā ʒj.
Cerati resinæ co., ʒj. M.
Apply to the breast.

*Linimentum Sapono-Camphoratum*, or *Opodeldoc Balsam*, rubbed on the breasts, has been observed to lessen the secretion, probably owing to the camphor in it.

*Mel.* In Italy, inunction of honey to the breast is popular at weaning.

*Potassii Chloras* has been found by Dr. ALEXANDER HARKINS efficient in controlling the excessive secretion of milk. (*Dublin Jour. of Med. Science*, November, 1880.)

***Potassii Iodidum*** is the most efficient of all antigalactics, and the only one which will not disappoint at times. The daily dose for this purpose is gr. xx.–xxx.

***Rhamnus Catharticus***, in infusion, internally, is recommended by Italian physicians. (FONNSAGRIVES.)

***Salvia.*** Strong sage tea is a popular remedy to dry the milk at weaning time.

# AGALACTIA AND OLIGOGALACTIA.

PROF. J. B. FONNSAGRIVES, M. D., PARIS.

This writer (*Therapeutique Appliquée*, 1878,) states that the agents to increase the secretion of milk find their application in three events—

1. That the milk is insufficient for the child.

2. That the secretion having become recently suppressed, an effort is made to re-establish it.

3. The sudden cessation of the secretion is coincident with the development of symptoms more or less serious in the mother.

1. *Means to increase the milk.* True galactogenic agents increase the quantity without diminishing the quality of the milk. Abundant and succulent food, fresh air, plenty of sleep, exercise, and, if required, bitter tonics, are the more rational measures. In Britany, cider, beer, and especially oatmeal porridge, have a wide reputation. Of drugs, the *Gallega officinalis* has been asserted on good authority to increase both the quantity and the quality of the milk.

2. *Means to re-establish the lactation.* When, after temporary intervention, it is desired to renew the secretion, the most efficient agents are—(1) *Suction*, either by the mouth of the infant or the nurse, or by one of the instrumental methods now familiar. (2) *Topical applications.* Of these the leaves of the castor oil plant, *ricinus communis*, deserve special mention. A handful of the fresh leaves is boiled in half a gallon of water, and the breasts are gently bathed and rubbed with this decoction for fifteen or twenty minutes, after which a poultice of the boiled leaves is laid upon the breast, and allowed to remain there till dry. If the secretion does not reappear in a few hours, this is to be repeated. (3) *Faradization.* The apparatus should be at moderate force, the conductors moist; the muscles of the breast should not be included in the current, which

should be confined to the gland, and the sessions should last about twenty minutes each. The success with this means has been positive.

3. *To prevent accidents from sudden cessation of milk.* These accidents have been greatly exaggerated by the older teachers of medicine, and these effete notions still prevail among the common people. When they are believed to be present, the indications are to relieve the system by brisk watery purgatives, or to restore the secretion of milk by some of the means which have been above mentioned.

C. H. F. ROUTH, M. D., LONDON.

To induce a flow of milk in the breast, *mechanical* treatment may be applied to the breasts or to the genitalia—as witness the effect of the application of the child, and this should be carefully persevered in.

*Electricity* is a powerful stimulus, as BECQUEREL, ALTHAUS, SKINNER, and others have proved in repeated cases, where they have succeeded in bringing on or restoring the secretion. SKINNER'S mode is:

*Direct.* Both poles are covered with moist sponges; the positive is pressed deep into the axilla, and the negative applied to the nipple and areola; the current being no stronger than is agreeable to the patient. Keep this position for about two minutes. Both poles are then to be inserted into the axilla, and gradually brought together, the negative to the sternal, the positive to the opposite side of the organ. This may occupy about two minutes.

*Intra-mammary.* Imbed the poles in the mamma, move them about, raising and depressing both at once in and about the organ for another two minutes. Perform this daily. Generally one or two sittings suffice.

As there exists great sympathy between the breast and the genital organs, the proper functional use of the one will influence the other.

Women who are nursing should have abundance of fresh air and cleanly surroundings, both of which are aids to lactation. As defective lactation is often induced by improper food, this, too, should be carefully observed, and supplied in sufficient quantities, and of proper quality—fish, rich in phosphorus, as oysters and crabs. In his own experience he gives the preference to *conger-eel* soup. It is particularly nourishing, and readily improves the appetite and strength. Among vegetables, are the *lentil* powder, pea soup and bean soup, all of which improve the flow and richness of milk. Turnips and potatoes are generally regarded as galactagogues. Edible fungi also increase the secretion. This author particularly lauds the *Elaphomices granulatus* or *Boletus*, or deer balls.

Drinks are useful, but are apt to be abused, as ale or porter. Best of all is milk itself, which may be alternated with the malt liquors, say two or three tumblers of milk to one of stout, or they may be combined.

Of *medicines*, he has found useful the *Saponaria vaccaria*, cow basil, vaccaria in strong infusion; the *Sonchus arvensis*, corn sow-thistle, in decoction; and the *Ricinus communis*. The latter, ROUTH was the first to use internally as a decoction, in England. Every time the flow has been remarkably increased. Some apparent objections to its use are, a sensation of dimness of vision; the dose requires to be increased; as it appears to lose its effect, a temporary suspension is best. Again, it seems to act as a diuretic. Here the breasts should be kept warm, and this result is less likely to occur. Where the diuretic effect is produced, it is well to smear the extract of the leaves over the breast in the same way as belladonna is used, with a warm, ordinary poultice outside. Dr. ROUTH uses a decoction of the leaves and stalks of the *Ricinus*. When an infusion of this article is given to non-suckling women, he has observed an internal pain in the breasts which lasts three or four days, and a copious leucorrhœal discharge, after which the pain in the breast disappears.

In two cases he saw emmenagogue effects. In both, there existed uterine congestion. This proves that the remedy should

not be used in cases where there is disease or irritation of the womb. Its action is remarkable in that it is not restricted to any particular portion of the suckling period; it may be immediate, that is, within twelve hours; rarely a week elapses before its galactagogue effect is observed; and lastly, its good effects do not wear off after a protracted continuance of its use, but its omission will often lead to a diminution, if not cessation of the secretion.

The *Jatropha manihot*, the *tapioca* or *cassava* plant, is said to act in a similar manner.

The *Coronilla juncia*, milk vetch, commonly called the milk weed, is second only to the castor oil bean; the fennel, dill, carrot, and several others, are popularly used, and no doubt more experience would prove their value.

*Common salt* may be regarded as a specific galactagogue. *Cod-liver oil* undoubtedly would act efficiently, though it has not been sufficiently tested.*

PROF. F. WINCKEL, M. D., ROSTOCK,

Requires good nourishment, and tonics or stimulants. In some a tea of fennel and anise seed has acted well, or the milk powder of pulv. semin. fœnic., sugar, cort. aurant., āā 2 grains, magnes. carb., 4 grains.

Where, on the contrary, the flow was too free, as in *galactorrhœa*, he would restrict the diet, promote copious alvine discharges, moderately compress the breasts, and nurse less frequently, and give *iodine* or *iodide of potassium*, 5 grains, three times a day.

KIWISCH suggests the injection of a solution of *caustic potassa*, 12 to 60 grains of water, into the excretory lacteal ducts. HAUCK uses compresses wet with decoction o. oak-bark, and

*For a very interesting article on the subject of galactagogues we refer the reader to Routh's valuable work "On Infant Feeding," to which we are indebted for the foregoing.

afterwards a solution of *nitrate of silver;* others, quinine, ammoniated iron, alum, quassia, and belladonna.

LANGE advises the *lactate of iron* with *phosphate of lime.*

JOULIN uses *Agaricus albus*, 1 gramme daily in four doses. VEIT resorts to purgatives, diuretics, and diaphoretics, and daily friction of the skin with hand and brush. ABEGG brings on in the course of ten or twelve days, by means of the uterine douche, a moderate uterine hemorrhage, thus effecting a cure.

### E. CUTTER, M. D., BOSTON, MASS.,

In an article entitled "Food as a Remedy for Agalaxia," says that he was led to the consideration of this subject by observing dairymen increase the quantity and quality of milk in cows by feeding them on bran, shorts, and meal. Hence, he was encouraged to see if nursing women might not do as well if they subsisted on cereal food that had not been subjected to an abstraction of seventy-five per cent. of its mineral ingredients. He employed a diet, excluding flour, but including wheat and maize unbolted, but ground coarse or fine, and animal food, and ordinary vegetables. In each case there was an abundant supply of excellent milk, and the child thrived accordingly.

There are five grains, namely—wheat, rye, barley, oats, and maize—each and all sufficient for the purpose of supplying an aliment that contains elements enough to sustain life in health, and enough, in the writer's opinion, to make milk.

It is the excess of starch in flour, and the abstraction of three-fourths of its mineral elements, that, in the writer's judgment, cause the agalaxia generally observed.

### ROBERT P. HARRIS, M. D., PHILADELPHIA,

In the *American Journal of Obstetrics*, vol. II., p. 675, shows the value of milk as an article of diet for the nursing woman. It should be given in addition to the other diet, and partaken of in small quantities frequently repeated. Chocolate, cacao, and

broma, made with a large proportion of milk, generally pure, is of great value, and should always be employed prior to the abandonment of the effort to nurse the child.

### DR. ALEXANDER HARKIN.

The claims of *chlorate of potash* as a galactagogue are strongly urged by this writer. (*Dublin Journal of Medical Science*, Nov., 1880.) He has repeatedly witnessed surprisingly good effects from it within a few days. Its influence, however, appears limited to the first three months of lactation, and there are some constitutions quite uninfluenced by its use. Those which respond most promptly are women of a sanguine temperament. The milk is also of an excellent quality, and the nursling often improves marvelously under its use. He usually prescribes it as follows:

361. ℞. Potassii chloratis, ℥j.
Aquæ, ℥j. M.
Half a wineglassful three times a day.

There is a condition well known to the profession in which ladies complain to their medical adviser of debility and wasting, night perspirations, palpitation and pain in the left side under the mamma, due to prolonged lactation; the mother is unwilling, or unable perhaps through delicacy of the child, to consent to ablactation. In this case, so very often occurring, by the administration of the chlorate combined with the tr. ferri perchlor, she may be enabled to prolong her maternal duties through the restoration of her strength, the increase of the secretion and improvement of its character, and the subsidence of the lateral pain.

### RÉSUMÉ OF REMEDIES.

*Fœniculum* in hot infusion, or a few drops of the oil, are popular remedies in deficient secretion.

*Gallega.* The goat's rue has a reputation in France. The *Gal-*

*lega Virginiana* of this country has a similar repute in some parts of the United States. (STILLÉ.)

*Gossypium.* Dr. IZETT W. ANDERSON, of Jamaica, reports to the Obstetrical Society of London that he has found a tea prepared from the green leaves of the *Gossypium barbadense* to be an efficacious galactagogue.

*Jaborandi* has been suggested by ROEHRIG.

*Ricinus.* Castor-oil plant leaves are alleged to be very efficient. (Pp. 531, 533.)

*Faradization* is much praised by French writers.

*Fomentations*, warm or hot, will frequently restore the secretion when temporarily checked. DE SINETY remarks that they probably act rather on the imagination than on the glands.

# DISEASES OF THE NIPPLES

PROF. FORDYCE BARKER, M. D. NEW YORK,

For sore nipples, recommends the following:

| | | | |
|---|---|---|---|
| 362. ℞. | Plumbi nitrat., | gr. x.–xx. | |
| | Glycerinæ, | f. ʒ j. | M. |

He also directs, as soon as the child is taken from the breast, that the nipple be painted freely with the compound tincture of *benzoin*.

If the ulcerative process has commenced, stop nursing from that nipple and paint it with a solution of *nitrate of silver*, of the strength of gr. x. to f. ʒ j. of distilled water. For inflammation of the nipple he recommends a soft bread and milk poultice for a few hours, and then keep the breast covered with one or two thicknesses of linen wet with a solution of lead and opium.

| | | | |
|---|---|---|---|
| 363. ℞. | Aquæ rosæ, | f. ʒ iijss. | |
| | Liq. plumbi subacet. dil., | f. ʒ ss. | |
| | Ext. opii aq., | ʒ j. | M. |
| Ft. lotio. | | | |

After the inflammation is so far subdued that nursing can be borne without much pain, he applies the following after carefully washing the nipple:

| | | | |
|---|---|---|---|
| 364. ℞. | Aquæ rosæ, | | |
| | Glycerinæ, | āā f. ʒ ij. | |
| | Acidi tannici, | ʒ ij | M. |
| Ft. lotio. | | | |

(*L' Union Médicale du Canada*, January, 1879.) The treatment recommended by M. BROCHARD for fissured nipples is so simple that it deserves to be popularized. When chaps exist on the nipples, whatever their extent, the nipple should be washed with pure water, and then dried and dusted with *suberin*, which, as

is known, is impalpable cork powder. The author has used it for several years, and prefers it to lycopodium for infants.

Dr. HAUSSMANN, of Berlin, recommends compresses soaked in a five per cent. lotion of *carbolic acid*, and changed every two or three hours, as the best remedy for sore nipples. If both breasts are affected, and, nevertheless, suckling has to be carried on, the nipple must be carefully washed each time, before the infant is put to them, to prevent poisoning by the acid.

The treatment pursued by Dr. HUEBNER, of Dresden, Saxony, in all lesions of the nipple and areola, consists in the constant application, day and night, of lukewarm compresses, wet with *lead-water ;* fissures, ulcers and excoriations being touched once or twice a day with *balsam of Peru*, and the breast well supported. The child should nurse less often than usual, and, if possible, through a nipple-shield. He recommends the warm lead-water in mastitis also, to be followed by strapping of the breast and free incision, while suppuration is promoted by poulticing.

In chaps of the nipple, Dr. CHARRIER, of Paris, recommends the employment of perfectly pure *picric acid* in the following formulas: *a.* One and a half parts to 100 parts of distilled water; *b.* one part to the 100 parts. After thoroughly cleansing the nipple with tepid water, the solution *a.* is to be applied every morning with a pencil to the cracks; and immediately after suckling, the nipple is to be held for four minutes in a glass containing the solution *b.* The infants do not notice the bitterness of the medicine, and willingly take the breast.

Dr. LE DE BORDIER, of Paris, thinks that in obstinate fissure of the nipple, *quinine* will prove to be of the greatest service; and during a long experience of it, has always found that a cure was effected in from three to five days. He generally prescribed a dose of 6 grains early in the morning, and a similar dose about eleven o'clock A. M. Local treatment was considered of secondary importance, being confined chiefly to poultices and some simple wash or salve.

[illegible] useful in

For sor[illegible]

[illegible] M.

He [illegible] to nurse; to be
that t[illegible]
*benzoi*[illegible]

If [illegible] gr. iss.
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stren[illegible] ℈ iv.
the [illegible] gtt. v. M.
few [illegible]
thi[illegible] [illegible]PHIA.

gr. iss.
f. ʒ v.
f. ʒ iij. M.

[illegible] and the oil, and shake

bo[illegible] [illegible] LONDON.
w[illegible] [illegible] application to sore nipples.
[illegible] immediately after suckling, and
[illegible] shield. Or the follow-

[illegible] āā ℥ ss. M.

r[illegible]
tl[illegible] [illegible] M. D., GLASGOW,
n[illegible]
p[illegible] [illegible] 1878,) gives this plan: Carefully

wash off the nipple with tepid water after each nursing; then wash it with weak spirit lotion, and glycerine, to prevent drying; or, if the excoriation be advanced, add an astringent, as tannin or a weak solution of nitrate of silver. If the part be not inflamed, to protect the nipple use a shield and apply a mild ointment, as oxide of zinc. If the nipple be retracted, gently draw it out with a breast pump. If still painful, use a glass nipple with a rubber teat. This ought to be of a proper shape; if too narrow, it constricts the nipple and occludes the ducts; if too long, a vacuum is caused between the extremity of the nipple and the mouth of the child, so that it cannot draw the milk into the teat. If too long, it will also tickle the fauces of the child.

Before applying the child to this nipple, the latter ought to be filled with some of the mother's milk; or, if this is not practicable, with sweetened milk and water. Some children take so kindly to this artificial nipple that it is difficult, after being long accustomed to it, to persuade them to use their mother's nipple again. But, should only one nipple be affected, this will not readily happen, *especially if the artificial teat be small enough.* The shield and teat in one piece, made of India rubber or other soft material, as softened ivory, will make suction easier for a weakly child, if it can be borne by the mother. There is, however, with its use, considerable compression of the nipple by the child's gums. A good artificial nipple has yet to be devised. If the nipple-shield can be borne, and the child can be coaxed to use it, there will be little difficulty in curing the nipples on general principles. In the event of excoriation of the nipple continuing after this attempt with the artificial nipple, and ulceration setting in, there remains no course but to take the child at once from that breast until the part is sufficiently restored to permit of its re-application. And here the careful use of a good breast-exhauster is important. For, should the breast become engorged while the nipple is tender, there is every prospect of abscess of the breast taking place. No matter how tender the nipple may be, a careful regulation of the compression ball by

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borax and glycerine, or chlorate
is the proper treatment for the
Perhaps it may suffice to point out,
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as a factor in the production of sore
nipple only is affected, this condition of
a very limited effect as an exciting

pass from the too ofter disappointing treat-
ples to consider the possibility of having the
their natural functions without the usual morbid

customary to order, as a prophylactic, weak spirit
or other mild astringent, but no evil results from the
on of stronger astringents. As an astringent, however,
if strong, is likely to cause a hardening only, and not
a toughening of the nipple, we may have this organ cracking as
soon as the outer film of hardened cuticle is removed, on the

first application of the child to the breast. To obviate this, mix glycerine with the astringent, and some fatty substance, as lard. The selection of the particular astringent is, of course, of importance; but the thoroughness with which it is applied is more so. The solution preferable is made thus: A large teaspoonful of dry tea is put into a two-ounce vial, one ounce of brandy and a quarter of an ounce of glycerine are added, and, after a few days, with occasional shaking, the solution is ready for use. For two or three months previous to parturition, the nipples should be thoroughly washed every night with cold water and glycerine soap, dried, and the above solution carefully brushed over the nipple, but especially around the base and into the apex. This is left on all night, and, in the morning, the lard is rubbed well in.

During this treatment the dress ought to be loose; and, if the nipples are at all retracted, they ought to be drawn out occasionally by suction or with the fingers and thumb. A circular piece of some unirritating material, with a hole in the centre, might be used in severe cases.

When the child is born, examine the nipples and breasts. If the latter are flaccid, do not put the child early to the nipple; and, when the milk has appeared, advise the application of the child at intervals of not less than two hours, and to both nipples at each application, giving careful instructions against letting the nipple remain in the child's mouth after it has emptied the breast, and especially against allowing it to sleep at the breast. The nipple is to be moistened with water or saliva before applying the child to it; and, when the infant quits the breast, the nipple should be washed with a mild astringent and antiseptic solution with glycerine; as a teaspoonful each of whiskey, tincture of arnica, and glycerine in a wineglassful of cold water. The nipple, as soon as the infant leaves the breast, is washed with this and partially dried, and a nipple-shield at once applied to protect the nipple from friction against the dress.

the hand, with occasional relaxation of the
occlusion of the lactiferous tubes, will alw
painless removal of the milk; though,
hard and yet no milk come, gentle fric
the breast may be required to expel t
proper into the lactiferous reservoirs
the breast-exhauster will readily with
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ounce of water, or 10
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two months or so before
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on, as oak-bark, or cologne
the skin, and the nipple
ield.

M. D., CHICAGO.

*Jour. and Exam.*, Dec. 1877,
m the irritation by the use of a
over the nipple as a thimble, and
and are surmounted with a false
spiration is applied to the rubber
um is formed in the shield, which is
the ducts. The most efficient, at the
and most simple variety of nipple-shields,
with a broad base to rest upon the breast.
the shield is wetted with saliva or
upon the breast more tightly.

It is true that the use of this kind of cupping-glass is not always free from pain, because it induces an engorgement of the nipple; but there is no other way in which the nipple can be placed so nearly at rest, at the same time that lactation is kept up. The immediate relief and rapid improvement which have followed the temporary use of this means, in cases where all sorts of lotions and collodion coating had failed, is surprising.

It sometimes happens that the child is not vigorous enough to draw the milk through the shield; then the aspiration should be made by an adult. In this manner the breast can be sufficiently emptied to protect it from trouble, until the lesion of the nipple has recovered. In the meantime the child can be sustained from the sound breast. Sometimes both nipples are the seat of lesions at the same time. Under these circumstances, if the child is unable to draw the milk through the shield, some other means must be devised, so that the milk may be saved for the infant. Make use of that simple form of breast-pump, which is practically like the nipple-shield. The bell-glass has a diverticulum, in which the milk is collected; and in place of the false nipple, there is a large rubber bulb, by means of which the vacuum is made. The milk can be poured from the receptacle, as often as filled, kept warm, and fed to the child with the spoon, or the simple nursing-bottle.

To cure the ulcers and fissures after the part is thus placed at rest, the *benzoated zinc ointment* is best. Wash the part carefully with castile soap and water, and cover the entire nipple and areola with the ointment. This need not be removed before drawing the milk through the shield. A few drops of *carbolic acid* will increase the efficiency of the ointment. For very red and highly-inflamed nipple, the best is a lotion of *acetate of lead*. This must always be washed off before the milk is drawn. If the ulcers are indolent, touch them with nitrate of silver. Ordinarily the ulcer needs only to be kept clean.

If the fissures are deep, glue the wound by coating it with collodion.

PROF. W. S. PLAYFAIR, M. D., LONDON.

Prepare the nipple during the latter months of pregnancy, by daily bathing it with a spirituous or astringent lotion, as cologne and water, or a weak solution of *tannin*. Wash and dry the nipple after each act of nursing, and if tender, protect it with a shield. Dr. WILSON, of Glasgow, in fissures of the nipple, uses a lotion of ten grains *nitrate of lead* in an ounce of glycerine, applied after each time of nursing, and the nipple carefully washed before the child is allowed to nurse.

This author finds nothing so good as a lotion of one-half an ounce each of sulphuric acid and glycerine of tannin, and an ounce of water, the beneficial effects of which are sometimes remarkable.

PROF. WM. LEISHMAN, M. D., GLASGOW,

Uses in obstinate cases:

370. ℞. Ac. tannici, gr. iij.
Glycerini, f. ʒ ss.
Ung. cetacei, ʒ j. M.

In fissures, introduce this by means of lint. If the margin be callous, apply solid nitrate of silver.

PROF. FLEETWOOD CHURCHILL, M. D., DUBLIN,

Prefers nitrate of silver in weak solution applied after each suckling. Mr. DRUITT recommends five grains pure *tannin* in an ounce of distilled water. Dr. JOHNSON applies alternately:

371. ℞. Sodæ boracis, ʒ ij.
Cretæ præp., ʒ j.
Spt. vini,
Aq. rosæ, āā f. ʒ iij. M.
Ft. lotio.

372. ℞. Ceræ albæ, ʒ ivss.
Ol. amygdal. dulc., f. ʒ j.
Mel. despumat., f. ʒ ss.
Dissolve by heat, then add by degrees,
Bals. Peruvian., f. ʒ ijss. M.
Ft. unguent.

Drs. McCLINTOCK and HARDY use tincture of *catechu*.

M. BOURDELL applies lint soaked in tincture of *benzoin*, repeated so as to form a coating over the sore.

### SAMUEL SLOAN, M. D., GLASGOW,

(*Obst. Jour. Gt. Brit. and Ire.*, Jan., 1878,) employs prophylaxis against sore nipples. He puts a large teaspoonful of dry *tea* into one ounce of brandy and a quarter of an ounce of glycerine. With occasional shaking, after a few days it is ready. For two or three months prior to delivery, the nipples are to be washed nightly with cold water and glycerine soap, dried, and the above solution brushed over the nipple and its base. In the morning, lard is well rubbed in. The dress must be loose, and retracted nipples drawn out. After delivery, moisten the nipple at each nursing, and after it wash with whiskey, tincture of arnica and glycerine, each a teaspoonful in a wineglassful of cold water. The nipple shield must be used to prevent irritation by the dress. When suckling deprives the nipple of its natural oil, apply fresh oxide of zinc ointment.

### PROF. F. WINCKEL, M. D.

In simple erythema and phlegmon, compresses wet with lead-water may be applied, taking care to cleanse the nipples before nursing. If there are slight erosions or excoriations, use a solution of *nitrate of silver*, one part to thirty; or *alum*, *sulphate of zinc*, etc., or *tannin*, one to fifty. Ulcers may be covered with balsam of Peru or copaiva, always using a shield to prevent a continuance of the irritation. When the raw spots remain, or the ulcers increase, the patient has fever, etc., wean the child. VELPEAU uses lotions of lead-water, or of oil and red wine, oil and lime-water, equal parts, nitrate of silver or sulphate of zinc, one or two parts to six of water. Cracks he sprinkles with the seeds of earth moss. Inflammation he treats with local discutients, mercurial salves and poultices.

*Glycerina* is much employed as an excipient. The glyceroles of lead, tannin, etc., are frequently efficient.

*Hydrargyri Chloridum Mite.* When the ulceration has destroyed the surface of the nipple, Dr. BARKER recommends that the child be prevented from nursing, and the following applied:

377. ℞. Hydrargyri chloridi mitis, gr. xxx.
Magnesiæ, gr. xx.
Unguenti rosæ, ℥j. M.
Rub together very carefully, and prepare fresh daily

*Hydrastis* has been found to be a valuable application in cracks or fissures of the nipple.

*Iodoformum.* Dr. M. O'HARA, of Philadelphia, uses:

378. ℞. Iodoformi, ℥ss.
Collodion, f.℥j. M.

*Krameria* is popular with some. (F. 366.)

*Picricum Acidum* has been extolled by Dr. CHARRIER. (P. 539.)

*Pix Liquida* is a valuable local application in eczematous conditions of the nipple.

*Plumbi Nitras* is, according to Dr. BARKER, the most complete prophylactic against the occurrence of sore nipple that we have. He directs, as soon as there is any inflammation of the nipple, to apply a poultice until the immediate symptoms are subdued, and then apply a solution of nitrate of lead gr. x., to glycerine f. ℥j. It should be used immediately after nursing, having washed the nipple perfectly clean. The nitrate is said to be of little use after fissures have actually occurred.

*Plumbi Subacetatis Liquor* is a grateful cooling lotion, properly diluted.

*Salicylicum Acidum* has been tried with excellent results in cracked and lacerated nipples. It is important not to apply it too strong, or it will irritate. Numerous and careful trials in the Vienna Hospitals have decided that the strength must not be over four per cent., as:

379. ℞. Acidi salicylici, gr. xv.–xx.
Alcoholis, q. s. to dissolve.
Unguenti petrolei, ℥j. M.
Apply on lint, or rub in several times a day.

*Sodii Biboras* in solution and ointment has a long-standing reputation.

*Suberin* has been recommended. (P. 538.)

*Tannicum Acidum* is an excellent astringent. Dr. S. S. PURPLE, of New York (*Medical Record*, 1879,) employs:

380. ℞. Acidi tannici, ʒj.
Acaciæ mucilaginis, f. ʒ iij.
Aquæ, f. ʒ ij. M.

It can be applied to the nipple and breast with the finger, and should remain exposed to the air until perfectly dry. The glass can then be worn over the nipple to protect it from the clothing, and he usually had no trouble in the management of the case.

Dr. HOWELL recommends the following in the *Canada Medical Record*, 1881:

381. ℞. Tannin, ʒj.
Subnit. bismuth, ʒij.
Vaseline, ʒj. M.

SIG.—To be applied constantly when the child is not nursing.

*Zinci Oxidum* is a soothing application in the form of the benzoated ointment.

*This book is the property of*
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*and is not to be removed from the Library [illegible] by any person on under any pretext whatever.*

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## Edited by D. G. BRINTON, M. D.

PUBLISHED JANUARY AND JULY OF EACH YEAR.

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We give on the opposite page a "Specimen Page" of the Medical Therapeutics, the size and style of the work.

SPECIMEN PAGE

OF THE

# Modern Therapeutics Series.



| | | | | |
|---|---|---|---|---|
| 552. | ℞. | Acidi nitro-muriatici, | f.ʒ iss. | |
| | | Tincturæ opii, | ♏xl. | |
| | | Syrupi, | f.℥ ss. | |
| | | Aquæ, | ad f.℥ iv. | M. |

A tablespoonful in water, four times a day.

DRS. BURKART AND RICKER, STUTTGART, GERMANY.

These writers have lately called attention to what they deem the extraordinary powers of *coto bark*, and its active principle, *cotoïn*, in diarrhœa, intestinal catarrh, and dysenteric disease. The remedy was employed in the form of powder, tincture, and the active principle, cotoïn. The taste of the powdered bark and tincture is particularly disagreeable, increasing the flow of the saliva in a marked degree. In moderate doses, they generally produce a burning sensation in the stomach, and, very frequently, eructations and vomiting, making both these forms of exhibition extremely undesirable. The employment of cotoïn is free from these objections, for very small doses produce the desired effect, without inducing secondary disturbances or disagreeable sensations of any kind.

| | | | | |
|---|---|---|---|---|
| 553. | ℞. | Cotoïnæ, | gr j. | |
| | | Aquæ destillatæ, | f.℥ iv. | |
| | | Alcoholis, | gtt. x. | |
| | | Syrupi, | f.℥ j. | M. |

A tablespoonful every hour.

Some of the cases were of long standing, some were severe attacks of cholera morbus, and others had been but little benefited by tannin, opium, or lead acetate. The above mixture produced speedy improvement—generally in a few hours—and complete recovery in from twelve hours to six days.

DR. EDWARD R. SQUIBB, BROOKLYN.

The following is a favorite prescription of this physician, in diarrhœa:

| | | | | |
|---|---|---|---|---|
| 554. | ℞. | Tincturæ opii, | | |
| | | Tincturæ camphoræ, | | |
| | | Tincturæ capsici, | āā f.℥ j. | |
| | | Chloroformi purificati, | f.ʒ iij. | |
| | | Alcoholis, | ad f.℥ v. | M. |

A teaspoonful as required.

## RÉSUMÉ OF REMEDIES.

### ACUTE DIARRHŒA.

*Camphor is reg*

[illegible] as one of the most efficacious of remedies in [illegible] commencement [illegible]

# THE PRINCIPLES AND METHODS OF THERAPEUTICS.

## BY ADOLPHE GUBLER, M.D.,

**Professor of Therapeutics in the Faculty of Medicine, Paris, Member of the Academy of Medicine, Physician to the Beaujon Hospital, etc. Translated by M. J. Halloran, M.D., etc. 1 vol., 8vo, pp. 445. Heavy tinted paper. Bound in Half Morocco, muslin sides. Price $4.00.**

---

Among the scientific therapeutists of the age, Professor GUBLER stood in the front rank. This work is a translation of his lectures in this specialty, and is rich in practical information and profound suggestions. There is no work on the principles of Therapeutics which will better repay close reading. It is a new book, having first appeared this year.

---

## OPINIONS OF THE PRESS.

"This book is replete with practical points in regard to the proper method of administering remedial agents. The practitioner will find in its pages much matter that he is in daily need of, and which perhaps he has sought for in vain in works treating of therapeutics from a different point of view. It will not fail to take its place as a standard work."—*The Medical Gazette*, April, 1881.

"This work is *sui generis*. It will pay the general practitioner to get it and read it; it will be found very attractive and highly profitable."—*The Country Practitioner*, March, 1881.

"The aim of this work is to represent, from the latest acquisitions of science and by the aid of the most careful instructions—first, the methods which can be most effectively employed in the administration of remedial agents, and next the principles or processes by which their remedial action is exerted on the human economy. This is very clearly carried out to its fullest aim, every obstacle being surmounted with great care. This work is gotten up very handsomely, doing full credit to the publisher's taste."—*The Southern Practitioner*, April, 1881.

"It is a book of immense value to the educated physician, who desires to know more than the simple fact that a certain drug will produce certain effects, and whose inquiring mind has often suggested to him the question: 'How are these effects produced; why does one medicine seek out the nervous system, another the heart, a third act as an alterative, and so on?' In this volume he will find his question answered, to the best of human ability. The author's explanation of the action of alteratives is particularly interesting. Professor Gubler was a worthy disciple of the great Trousseau, and the opinions given in this work bear the stamp of high and undoubted authority."—*The American Specialist*, April, 1881.

"The work, more than any other of the kind with which we are acquainted, is a *science of therapeutics*. The author has aimed to unfold principles. The student who loves to be able to give a reason for all that he does in the application of remedies to disease will find it a work just to his mind."—*Cincinnati Medical News*, March, 1881.

"This work is unique in design. The reader who expects to find it like most books upon this subject will be agreeably disappointed. The author approaches his subject in a different manner from the majority of writers, and this very fact constitutes one of the charms of the work. The reader will gain a better notion of its scope by a selection from the table of contents. The first four chapters are devoted to a consideration of general therapeutics, in which the composition, properties, etc., of medicinal substances are discussed. Then follow nine or ten chapters on avenues for the introduction of medicaments, elaborate and careful description of the methods by inhalation, fumigations, aerotherapy, atomization of liquids, by absorption from open wounds, baths, by hypodermic injection, acupuncture, transfusion. A few chapters are devoted to arsenic, and the last chapters to the elimination of medicaments, accumulation of remedial agents, force of habit, antagonism between morphine and atropine, and conditions affecting medicinal action. We think it a book at once readable and instructive. It has been excellently translated. We would urge all physicians to obtain it.—*Nashville Journal of Medicine and Surgery*, April, 1881.

On the opposite page we give a "specimen page" of Gubler's Therapeutics, showing the size and type.

# SPECIMEN PAGE

OF

# GUBLER'S THERAPEUTICS.



is, that it cannot fail to be of benefit to those suffering from tubercles to breathe the air on high table-lands.

It is very possible that under the conditions in which the high table-lands of Mexico are, there may be no sufferers from tubercles there. With regard to anæmia, I recall a conversation which I had with a distinguished personage who has lived on the high table-land above Quito, at an altitude of 4200 metres. While there he had to put up with a great many privations, but this did not prevent him from taking daily observations, the results of which he sent to the Paris Academy of Sciences. I questioned him for the purpose of learning if at Antizana and at Quito (an altitude of 2200 metres) there were habitual anæmics. He replied that, on the contrary, the population was in splendid physical condition, and that the inhabitants were very vigorous. You see that there are reservations to be made as to the influence of altitude upon the development of anæmia. Hence it were presumption at present to infer a sort of antagonism between anæmia and tuberculosis.

Inhalations of oxygen have long been in use. At the end of the last century, following Fourcroy's example, they were used against asthma. This malady chiefly presenting difficulty of breathing, seemed to call for either condensed air or pure oxygen, since the purpose was to supply air in excess to the patient. In Laënnec's time, oxygen was tried against asthma, but without success. In other cases where better results were obtained, it is evident they had not to contend against asthma, but against real dyspnœa, or, if you prefer, against asthma symptomatic of a lesion of the heart, or of other affections of the thoracic organs. Oxygen does not suit asthmatics, and, for my part, I have never seen it successfully used against asthma, properly so called.

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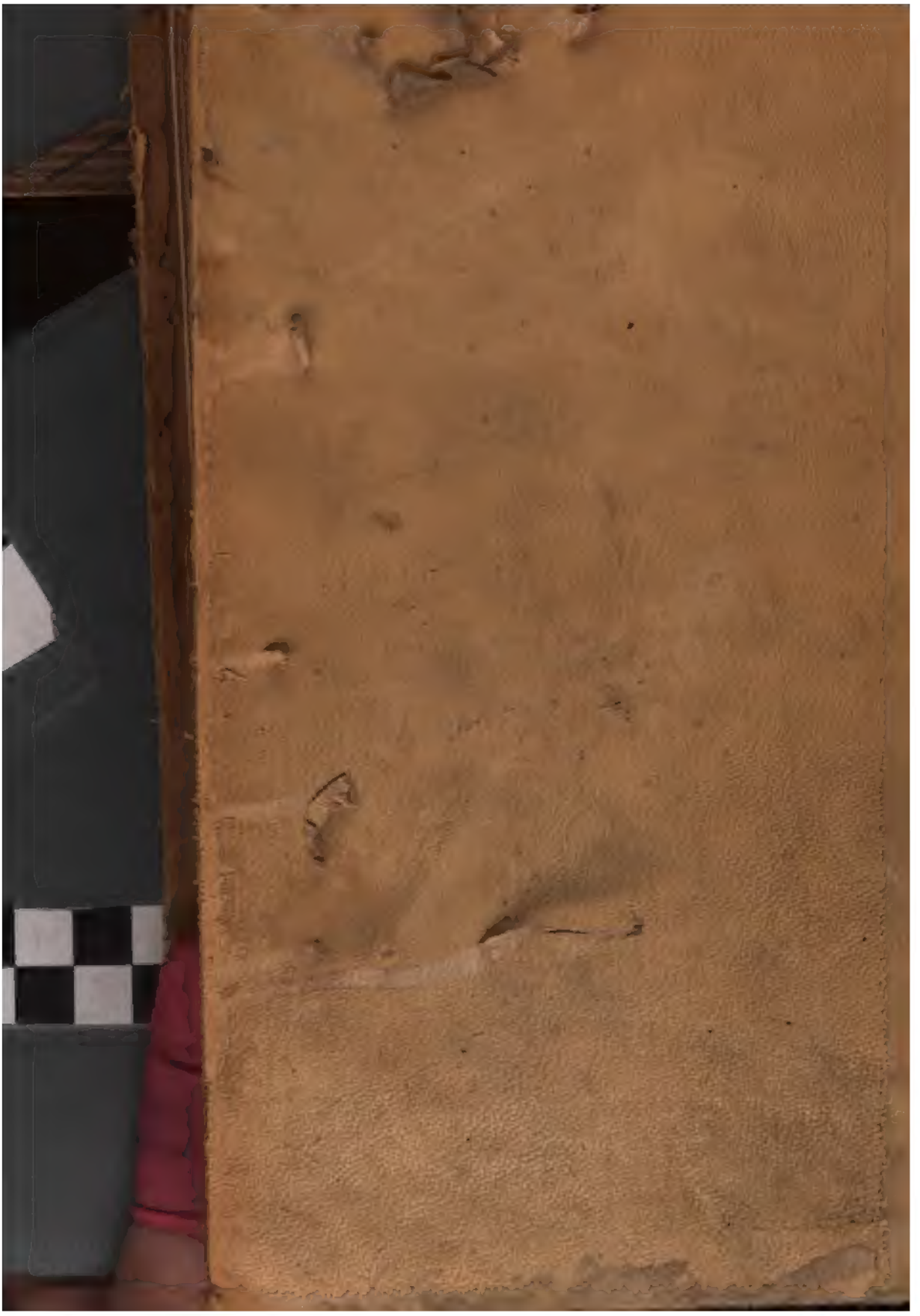
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